Meridian 1

Option 11C and 11C Mini

Upgrade Procedures Guide

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The *Software Installation Program Guide (553-3021-310)*, Standard 1.0 and the *Upgrade Procedures (553-3021-250)*, Standard 1.10 were combined to form this version of the *Upgrade Procedures* guide.

September 1996

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About this guide

This document is a global document. Contact your system supplier or your Nortel Networks representative to verify that the hardware and software described is supported in your area.

The *Option 11C and 11C Mini Upgrade Procedures Guide* contains the following information required to upgrade existing Option 11 and Option 11E systems to an Option 11C.

- upgrade to Option 11C from an Option 11 or Option 11E
- upgrade to Option 11C compatible with dual port expansion daughterboards from an existing Option 11C that is not compatible

This guide also contains the following procedures for updating software on Option 11C and Option 11C Mini systems:

- upgrade Option 11C software to a new release
- perform a same release software upgrade
- revert to a previous database
- restore a backed up database
- archive databases
- install archived databases
- review and clear upgrade information

This guide does not describe how to add equipment (such as additional cabinets or line cards) to the system. If part of the upgrade is expanding the system, complete the upgrade first (as described in this guide), then add equipment.

Related documents

Refer to *Option 11C Planning and Installation* (553-3021-210) when the upgrade includes adding equipment (such as another expansion cabinet at a remote site). It also contains site planning information and new system installation details for Option 11C systems.

Refer to *Option 11C Mini Planning and Installation* (553-3021-209) for site planning information and system installation details for the Option 11C Mini system.

Where to start for upgrades

"Start here to perform upgrades" on page 9 is your starting point for upgrades.

Start here to perform upgrades

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This section contains information on the following topics:

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Upgrade selection list 10
Upgrade an Option 11 or Option 11E 10
Upgrade an existing Option 11C 11
Upgrade Software 11
Database Management 12

Reference list

The following are the references in this section:

- *Option 11C Planning and Installation* (553-3021-210)

This chapter is the starting point for all Option 11, 11E, and 11C software and hardware upgrades. It indicates which procedure to follow to complete the required upgrade.

> ***Note:*** This guide describes how to prepare the main cabinet of an Option 11C for a third expansion cabinet. But it does not describe how to add equipment to the system. If you plan to expand the system as part of the upgrade, complete the upgrade first (as described in this guide). Then add equipment as described in *Option 11C Planning and Installation* (553-3021-210).

Upgrade systems to hold three or more expansion cabinets

To equip a system with more than two expansion cabinets, the system must be an Option 11C with Release 24.24 or later software. If the existing system is not this type of system, upgrade the system to Option 11C. See "Upgrade selection list" on page 10 for how to select the appropriate upgrade.

When you have upgraded to Option 11C with fiber-optic cable capabilities, follow the procedures to upgrade the hardware. See "Upgrade cabinet hardware" on page 111.

Upgrade selection list

Select the appropriate upgrade from the following upgrade descriptions.

Upgrade an Option 11 or Option 11E

You can upgrade an Option 11 or Option 11E system with:

- one cabinet
- two cabinets
- two or more cabinets interconnected by fiber-optic cable

The existing Option 11 or 11E has one cabinet

If the existing system is an Option 11 or Option 11E with a main cabinet, refer to "Upgrade a single-cabinet system to Option 11C" on page 13.

The existing Option 11 or 11E has two cabinets

If the existing system is an Option 11 or Option 11E with one main and one expansion cabinet interconnected with metal cable, refer to "Upgrade a two-cabinet system with metal cable to Option 11C" on page 29.

> ***Note:*** This upgrade procedure does not apply to systems interconnected with fiber-optic cable.

The existing system is an Option 11E with cabinets interconnected by fiber-optic cable

If the existing system has a main cabinet and one or two expansion cabinets interconnected with fiber-optic cable, refer to "Upgrade an Option 11E with fiber-optic cable to Option 11C" on page 83.

Upgrade an existing Option 11C

You can upgrade an Option 11C system that has one or two cabinets. Or, if you plan to add a third or fourth expansion cabinet, you can upgrade an Option 11C with fiber-optic capabilities.

The existing system is an Option 11C with two cabinets interconnected by metal cable

If the existing system is an Option 11C with two cabinets interconnected by metal cable, refer to "Upgrade a two-cabinet system with metal cable to Option 11C" on page 29.

The existing system is an Option 11C with a single cabinet

If you plan to add expansion cabinets to an Option 11C with a single cabinet, refer to *Option 11C Planning and Installation* (553-3021-210).

The existing system is an Option 11C and you plan to add a third expansion cabinet

> ***Note:*** The existing system must be at least an Option 11C with fiber-optic cable capabilities before you can add a third or fourth expansion cabinet. Upgrade the existing system, if necessary, before trying to add a third (or fourth) cabinet.

To expand the existing Option 11C to include more than two expansion cabinets, complete the following steps:

1. Refer to "Upgrade cabinet hardware" on page 111, and upgrade the main cabinet (as needed).
2. Refer to "Upgrade the NTDK20AB SSC or later to the NTDK20CA SSC" on page 119, and upgrade the SSC card (as needed).
3. Refer to *Option 11C Planning and Installation* (553-3021-210) to add the additional cabinets.

Upgrade Software

The following sections describe the software upgrades you can perform.

Update the boot code

To update the boot code on one of the following cards, refer to "Firmware upgrade procedure for IP daughterboard" on page 265:

- NTDK20 SSC card
- NTDK97 MSC card

Upgrade software to Option 11C from a Software Daughterboard or PCMCIA card

To upgrade software from an Option 11 or 11E to Option 11C, refer to "Option 11/11E upgrade from Software Daughterboard or PCMCIA Card" on page 177.

Update to a new release of software

To update to a new software release, refer to "Upgrade Option 11C/11C Mini software to a new release" on page 197.

Change feature set and ISM parameters

To change the feature set or ISM parameters, refer to "Feature set and ISM parameters upgrade" on page 243.

Database Management

You can restore a backed up database, archive a database, or remove a database.

Restore a backed up database

To restore the backed up database from one of the following, refer to "Archive and remove databases" on page 257:

- backup flash drive
- software delivery card (PCMCIA card)
- Customer Configuration Backup and Restore (CCBR) file

Archive and remove databases

Refer to "Archive and remove databases" on page 257 for direction on how to

- archive a new customer database
- list the archived databases
- remove existing databases

Upgrade a single-cabinet system to Option 11C

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This section contains information on the following topics:

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Expansion cabinets and additional equipment 15
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Restore data when an upgrade fails 26

Reference list

The following are the references in this section:

- *Option 11C Planning and Installation* (553-3021-210)

This chapter describes how to upgrade an Option 11 or Option 11E with a single cabinet to an Option 11C. Sections in this chapter cover the following topics:

- what items you need for the upgrade
- how to upgrade to Option 11C
- how to revert back to Option 11 or Option 11E

Summary of items required

You need the following items to complete this upgrade:

- NTDK20 Small System Controller (SSC) card
- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK27 Ethernet cable (optional)
- Software Daughterboard

  Note: You must have Release 24 or later software to install dual port expansion daughterboards as part of the upgrade.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:
  - personal computer (PC) equipped with XModem CRC software to run the Customer Configuration Backup and Restore (CCBR) feature
  - NTDK30AA \Database Upgrade Tool (to extract data from the cartridge)

  Note: The PC can be on-site or located remotely using a modem.

Upgrade to Option 11C

This section includes a summary of steps and the upgrade to Option 11C procedure.

Summary of steps

The following list of steps describes how to upgrade a single-cabinet Option 11 or Option 11E to an Option 11C:

1 Perform a data dump (EDD) on the existing system.

2 Extract the customer data from the existing system using the CCBR feature, unless you are using the Database Upgrade Tool.

3 Install the NTDK20 SSC card.

4 Install the NTBK48 three-port SDI cable, if you upgrade from Option 11E, this cable is already present.

5 Load the new system software and customer data into the system.

6 Install the NTDK27 Ethernet cable (optional).

Expansion cabinets and additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment, such as line cards. If you plan to add these items as part of the upgrade, first complete the upgrade as described in this chapter. Then, refer to *Option 11C Planning and Installation* (553-3021-210) for information about adding expansion cabinets and other equipment to an existing Option 11C system.

Upgrade procedure

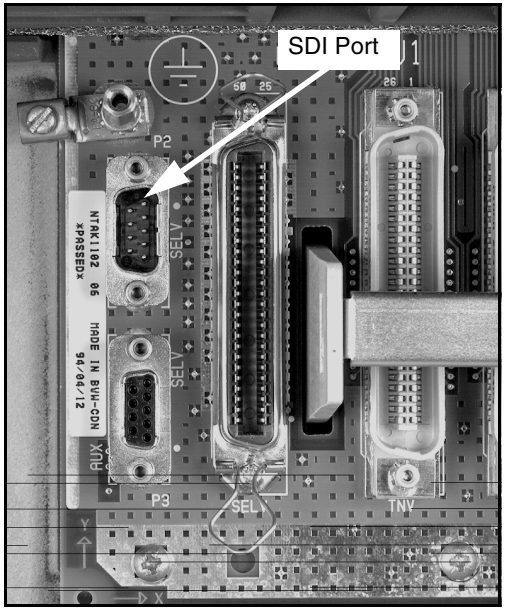
Procedure 1 on page 15 describes how to upgrade a single-cabinet Option 11 or Option 11E to Option 11C.

Procedure 1
Single-cabinet upgrade to Option 11C

1 Connect a TTY terminal to SDI Port 0.

Make sure the terminal connects to the SDI Port 0 (see Figure 1 on page 16).

Figure 1
SDI Port 0



2 Log into the system and perform a data dump on the existing system.

You must perform this step. It makes sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

a Load LD 43.

b Enter command **EDD**. Allow the data dump to finish.

c Exit LD 43 by entering ****.

3 Load LD 22 and print the ISM parameters. Make a note of the existing parameters.

At the REQ prompt, type **SLT** and press <CR> to print the ISM parameters.

The existing software cartridge indicates the ISM parameters.

4 **Do one of the following:**

- If you are using the Database Upgrade Tool to extract the customer database from the existing system, disregard this step. Go to Step 5 on page 17.
- If you are using the CCBR feature to extract the customer data from the existing system, perform the following steps.

a Use a PC to log in to the existing Option 11.

b Load LD 43 and enter **XBK** to start a configuration data backup.

c At the `INFO` prompt, enter a name for the file (up to 128 characters) and press <CR> twice.

Wait for the transfer to finish, until you see an `OK` message. The transfer can last up to 30 minutes

d Enter **XVR** to check the backed up data.

e Exit LD 43 by entering `****`.

5 **Disconnect the power from the cabinet.**

Set the circuit breaker switch, on the front of the power supply unit in the cabinet to OFF.

If the system has reserve battery power, set the circuit breaker switch inside the reserve battery power unit, to OFF.

6 **Attach the antistatic wrist strap provided at the bottom of the cabinet to your wrist.**

7 **Remove the NTAK01 CPU/Conf or NTBK45 System Core card from the cabinet.**

8 **Set the baud rate switches on the new NTDK20 SSC card to match the settings on the card you removed: either the NTAK01 CPU/Conf card or NTBK45 System Core card.**

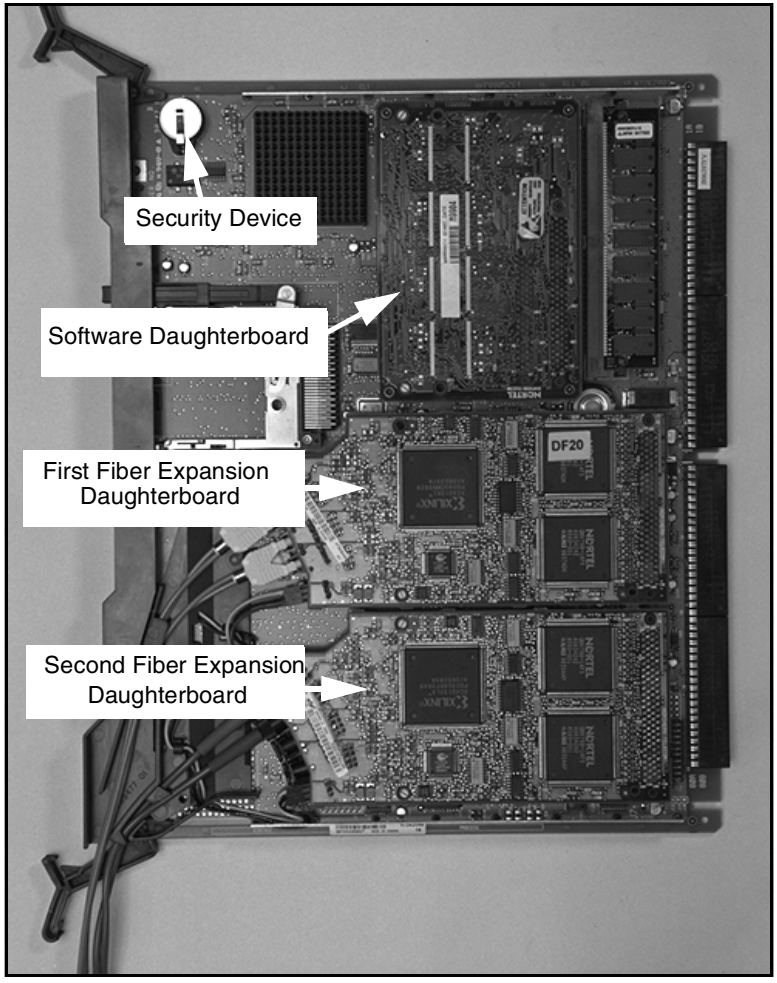
Note: The baud rate switches are on the faceplate of the NTDK20 SSC card.

9 **Install the Software Daughterboard and Security Device on the NTDK20 SSC card as shown in Figure 2 on page 18**.

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 2
NTDK20 SSC card



10 (Optional step) If you plan to add one or more expansion cabinets as part of the upgrade, install a Fiber Expansion Daughterboard.

Note: You can complete this step after you have upgraded the main cabinet to Option 11C. However, you can prevent additional downtime by installing any required Fiber Expansion Daughterboards now. Refer to *Option 11C Planning and Installation* (553-3021-210) for detailed information about adding expansion cabinets to an existing system.

WARNING

The fiber-optic interface product used in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of the fiber-optic cable. Under some conditions, the cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. Do not remove protective caps or plugs until ready to connect the cable.

a Install the Fiber Routing Guide as shown in Figure 3 on page 21.

The P0816832 Fiber Routing Guide can hold a maximum of two fiber-optic cables. Use it in cabinets that are operating software released before Release 24 software. The P0888475 Cable Routing Guide can hold up to four cables. Use it in cabinets that run Release 24 and later versions of software.

b Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for added expansion cabinets, refer to Figure 2 on page 18.

There are two types of expansion daughterboards: single port and dual port. Single port expansion daughterboards are compatible with all versions of NTDK20 SSC cards. Dual port expansion daughterboards require an NTDK20CA or later version of the SSC card.

c Connect the fiber-optic cable to the daughterboard.

- If you are using the A0632902 cable

i Remove the two protective plugs from the Fiber Expansion Daughterboard.

ii Connect the cable to the Fiber Expansion Daughterboard. Make sure the “V” shaped groove on the cable connector faces out and the connector seats tightly. When you make the connection correctly, the black mark on the connector is not visible.

- If you are using glass fiber-optic cable

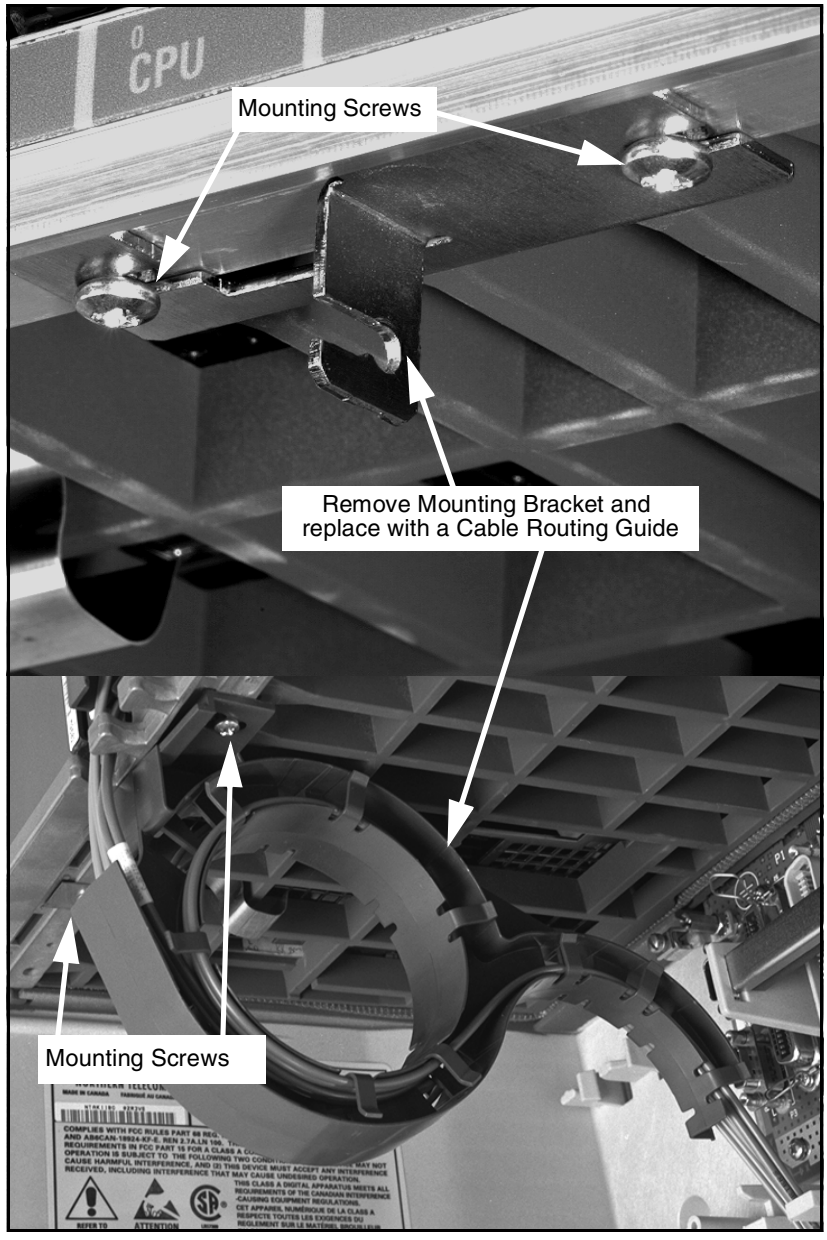
  i Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the fiber-optic cable.

  ii Insert the plug in its connector indicated on the daughterboard.

  iii Lock the connector in position by turning it a half turn clockwise.

  iv Repeat these steps for the remaining fiber-optic connections.

Figure 3
Cable Routing Guide



11 Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTBK45 card (Slot 0).

If a fiber-optic cable is present (see optional Step 10 on page 19), make sure that it is in the fiber routing guide.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

12 Do one of the following to extract customer data from the existing system:

- If you are using a PC with the CCBR feature, skip this step and go to Step 14 on page 23.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.

a Remove the software cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card.

b Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool.

c Hold the Database Upgrade Tool with the software cartridge on the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 4 on page 23.

13 Connect the power to the cabinet.

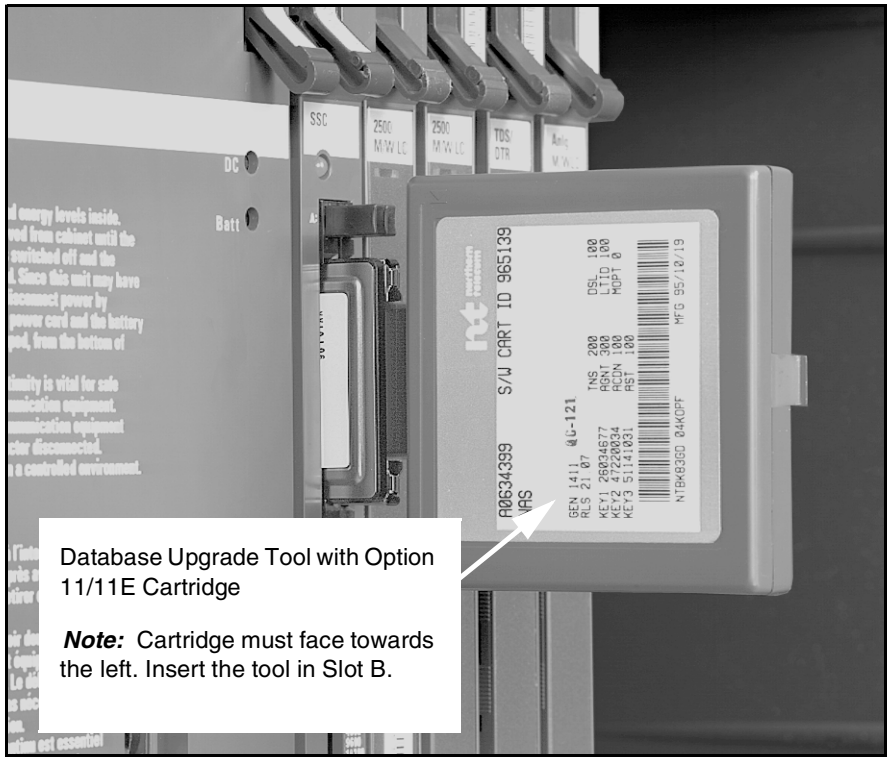
Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

When you power up, the Software Installation Program starts automatically.

Note: The Software Installation Program is menu-driven, allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to *Option 11C Planning and Installation* (553-3021-210).

Figure 4
Database Upgrade Tool



14 Install the NTBK48 three-port SDI cable to SDI port 0 if you have not already installed it.

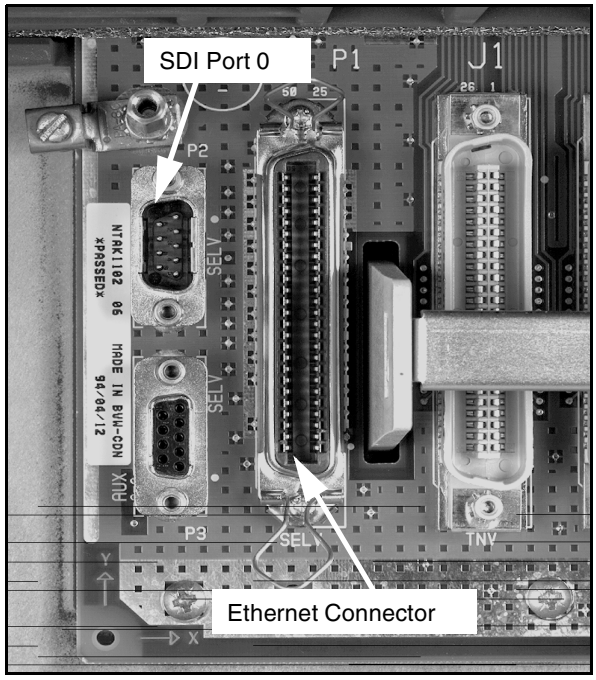
Connect the TTY terminal to the connector on the NTBK48 cable labeled “Port 0” (see Figure 5 on page 24).

Note: Because Option 11E systems also use this cable, when upgrading from Option 11E, this cable is already present.

CAUTION

To access the Software Installation Program, the TTY must connect to port 0.

Figure 5
Cable connection



15 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: This program is menu-driven, allowing easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you to make correct selections. However, if you need more detailed information, refer to *Option 11C Planning and Installation* (553-3021-210).

The following is a summary of the steps as described in *Option 11C Planning and Installation* (553-3021-210):

a Enter the system time and date if the system prompts you. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date that is not in the range of 1995 to 2095.

b Select the type of upgrade you plan to do.

- If using the Software Delivery (PCMCIA) card

  i Select System Upgrade from the Software Installation Main Menu.

  ii Select “Option 11/11E to Option 11C” from the “Select type of upgrade to be performed” menu.

- If you are using the Software Daughterboard, select “New System Installation or Option 11/11E Upgrade - From Software Daughterboard.”

c Select the feature set to be enabled.

Select the feature set from the “Select Feature Set You Wish to Enable” menu.

Note: The items you select in steps c, d, f, g, and h must match the one provided with keycode data sheet.

d Select feature package numbers to add (if any).

Enter the package numbers. Press <CR> twice to end package selection.

e Select the database source.

Select one of the following from the “Select Option 11/11E Database Source” list:

- CCBR file. Select this option if you used the CCBR feature to extract the customer database. This option accesses the Data Transfer mode. To begin the data restoration and upgrading process, enter <CR> when prompted. Continue with Sub Step g below.
- Option 11/11E Software Cartridge. Select this option if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

f When the message “Database has been moved ...” appears, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.

g Select the ISM parameters.

Compare the ISM parameters with the ISM parameters you printed in Step 3 on page 16. Make any required changes. Any changes must compare to the Keycode Datasheet.

h Define the new AUX ID.

The default AUX ID is the security ID provided with the Option 11C. You need to replace it with the previous Option 11 or Option 11E site ID.

i Confirm the information entered and enter the validation keycodes.

The terminal displays New Installation Information Summary. Make any necessary changes to the information then enter the keycodes.

j Complete the software installation when prompted.

CAUTION

If you enter YES, the system reloads (SYSLOAD) to complete the installation.

16 Wait for the software installation to finish.

17 If you have the optional NTDK27 Ethernet cable, connect it to the expansion connector in the cabinet (see Figure 5 on page 24).

18 If necessary, change the tone and SDI functions.

The NTDK20 SSC card combines many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 163 for more information.

19 Load LD 43, and perform a data dump (EDD).

End of Procedure

Restore data when an upgrade fails

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade fails. To revert back, insert one of the following back into slot 0 of the main cabinet:

- the Option 11 NTAK01 CPU/Conf card
- the Option 11E NTBK45 System Core card and the software cartridge

Then, reload the system.

Procedure 2
Revert back to Option 11/11E

1 **Disconnect the power from system.**

2 **Remove the NTDK20 SSC card from slot 0 in the main cabinet.**

3 **Attach the software cartridge to the NTAK01 CPU/Conf card or NTBK45 System Core card if you removed it before.**

4 **Insert the NTAK01 CPU/Conf card or the NTDK45 System Core card in slot 0, and power up the system.**

5 **Restore the NTAK1118 SDI cable if equipped before.**

End of Procedure

Upgrade a two-cabinet system with metal cable to Option 11C

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Reference list

The following are the references in this section:

- *Option 11C Planning and Installation* (553-3021-210)
- *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330)
- *Option 11C and 11C Mini Fault Clearing* (553-3011-500)

This chapter describes four procedures:

- Procedure 3 on page 37, "Upgrade without fiber-optic connection." Upgrade an existing two-cabinet system interconnected with an NTAK1204 or NTAK1205 cable
- Procedure 4 on page 44, "Upgrade with fiber-optic connection." Upgrade a two-cabinet Option 11C with an NTAK1204 or NTAK1205 cable to fiber-optic connection
- Procedure 5 on page 66, "Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection." Upgrade a two-cabinet Option 11C with an NTAK1204 or NTAK1205 cable to fiber-optic connection.
- Procedure 6 on page 80, "Restore data because of an upgrade failure." Revert to an Option 11 or Option 11E.

The main sections in this chapter describe each of these procedures. See the sections under the following headings:

- "Summary of procedures" on page 30
- "Summary of items required" on page 32
- "Summary of steps" on page 35
- "Upgrade procedures" on page 36

Summary of procedures

This section describes the three procedures:

- Upgrade without fiber-optic connection to Option 11C

- Upgrade with fiber-optic connection to Option 11C
- Upgrade to fiber-optic connection.

Upgrade without fiber-optic connection to Option 11C

The upgrade without fiber-optic connection keeps the existing NTAK12 expansion cabinet and the NTAK1204 or NTAK1205 interconnecting cable. The new system that results from this upgrade provides all the features made available with Option 11C with the following limits:

- There is no Ethernet capability.
- Symposium Call Center Server, Symposium Express, MAT 6.5, Call Pilot, Internet Telephony Gateway will not be supported.
- There is no fiber-optic interconnect cable capability. Limiting the distance between the main and expansion cabinets to the length of the existing NTAK1204 or NTAK1205 cable.
- The system can only have two cabinets (a main cabinet and one expansion cabinet). This gives a maximum 20 slots.

Procedure 3 on page 37 describes how to do an upgrade without fiber-optic connection.

Upgrade with fiber-optic connection to Option 11C

With the upgrade of fiber-optic connectivity, the new system provides all the features made available by Option 11C without limits. However, this upgrade replaces the existing NTAK12 expansion cabinet with an NTAK11 cabinet, which connects it to the main cabinet with fiber-optic cable.

Procedure 4 on page 44 describes how to do an upgrade with fiber-optic connection.

Upgrade to fiber-optic connection

This upgrade takes an upgraded Option 11C without fiber-optic connection and upgrades it to an Option 11C with fiber-optic connection. This procedure applies to an Option 11C that remains connected to an NTAK12 expansion cabinet with an NTAK1204 or NTAK1205 cable. This upgraded system provides all the features made available by Option 11C without limitations. However, this upgrade replaces the existing NTAK12 expansion cabinet with an NTAK11 cabinet.

Procedure 5 on page 66 describes how to do an upgrade to fiber-optic connection.

Summary of items required

Refer to the appropriate section to find out which items you need:

- to upgrade a two-cabinet system to Option 11C
- to connect an existing expansion cabinet with an NTAK1204 or NTAK1205 expansion cable

Upgrade without fiber-optic connection

For an upgrade without fiber-optic connection, you need the following items:

- NTDK20 Small System Controller (SSC) card
- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK26 Backwards Compatible Daughterboard
- Software Daughterboard

  Note: You need Release 24 or later software if you install dual port expansion daughterboards as part of the upgrade.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:
  - personal computer (PC) equipped with XModem CRC software to run the CCBR feature
  - Database Upgrade Tool (extracts data from the cartridge)

  Note: The PC can be on-site or located remotely.

Upgrade with fiber-optic connection

For an upgrade with fiber-optic connection, you need the following items:

- NTDK20 Small System Controller (SSC) card

  Note: If you use dual port expansion daughterboards, you must have an NTDK20CA or later version of the SSC card.

- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard (30 ft)
- NTDK79 Single Port or NTDK85 Dual Port Fiber Expansion Daughterboard (2 mile)

  Note: Use an NTDK22 or NTDK84 Fiber Expansion Daughterboard when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

  — NTDK24 (Multimode)

  — NTDK79 (Single Mode)

  — NTDK85 (Dual Port) Fiber Expansion Daughterboard

- NTDK23 Fiber Receiver card

  Note: Use the NTDK23 Fiber Receiver card when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

  — NTDK25 (Multimode)

  — NTDK80 (Single Mode) Fiber Receiver card

- A0632902 (was A0618443) Fiber-optic cable

  Note: Use this cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). For distances up to 3 km (1.8 mi), you need to get duplex glass fiber-optic cable from a local provider.

  Note: You need Release 24 or later software if you plan to install dual port expansion daughterboards as part of the upgrade.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:

— personal computer (PC) equipped with XModem CRC software to run the CCBR feature

— Database Upgrade Tool (extracts data from the cartridge)

Note: The PC can be on-site or located remotely

- NTAK11 cabinet
- Two Fiber Routing Guides (one comes with the NTAK11 cabinet and an additional one is available for the expansion cabinet)
- NTDK27 Ethernet cable (optional)

Upgrade Option 11C without fiber connection to fiber-optic connection

For an NTAK12 expansion cabinet upgrade on an upgraded Option 11C, you need the following items:

- NTAK11 cabinet
- Two Fiber Routing Guides
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard

  Note: Use the NTDK22 or NTDK84 Fiber Expansion Daughterboard when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

  — NTDK24 (Multimode)

  — NTDK79 (Single Mode)

  — NTDK85 (Dual Port) Fiber Expansion Daughterboard

- NTDK23 Fiber Receiver card

  Note: Use the NTDK23 Fiber Receiver card when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if you plan to move the expansion cabinet up to 3 km (1.8 mi) of the main cabinet.

- A0632902 (was A0618443) Fiber-optic cable (only required with the NTDK22)

Note: Use the A0632902 cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). For distances up to 3 km (1.8 mi), you need to use duplex glass fiber-optic cable from a local provider.

- NTDK27 Ethernet cable (optional)

Summary of steps

The following sections describe the steps for each type of upgrade covered in this chapter.

Upgrade without fiber-optic connection

You must follow the following steps to upgrade a two-cabinet Option 11 or Option 11E to Option 11C without fiber-optic cabinet interconnection:

1 Perform a data dump (EDD) on the existing system.

2 Extract the customer data from the existing system using the CCBR feature (unless you use the Database Upgrade Tool).

3 Install the NTDK20 Small System Controller (SSC) card equipped with NTBK26 Backwards Compatible Daughterboard.

4 Install the NTBK48 three-port SDI cable. If you are upgrading from Option 11E, this cable is present.

5 Load the new system software and customer data in the system.

Procedure 3 on page 37 describes these steps in detail.

Upgrade with fiber-optic connection

The following list reviews the steps to upgrade a two-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

1 Perform a data dump (EDD) on the existing system.

2 Extract the customer data from the existing system using the CCBR feature (unless you are using the Database Upgrade Tool).

3 Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet.

4 Install the NTDK20 SSC card equipped with Fiber Expansion Daughterboard.

5 Install the NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable is already present).

6 Load the new system software and customer data in the system.

7 Replace the existing expansion cabinet with an NTAK11 cabinet.

8 Connect the expansion cabinet to the main cabinet.

Procedure 4 on page 44 describes these steps in detail.

Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection

You can upgrade a two-cabinet system to an Option 11C with fiber-optic and connection in two parts. Upgrade to an Option 11C. Then, upgrade the NTAK1204 or NTAK1205 cable to a fiber-optic connection. The following list reviews the steps to follow:

1 Perform a data dump (EDD).

2 Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet.

3 Install the Fiber Expansion Daughterboard on the NTDK20 SSC card.

4 Replace the existing expansion cabinet with an NTAK11 cabinet.

5 Connect the expansion cabinet to the main cabinet.

Procedure 4 on page 44 describes these steps in detail.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment such as line cards. To add additional expansion cabinets or other equipment as part of the upgrade to Option 11C, complete the upgrade as described in this chapter. Then refer to *Option 11C Planning and Installation* (553-3021-210) for information about adding expansion cabinets and other equipment to an existing Option 11C system.

Upgrade procedures

Upgrade without fiber-optic connection

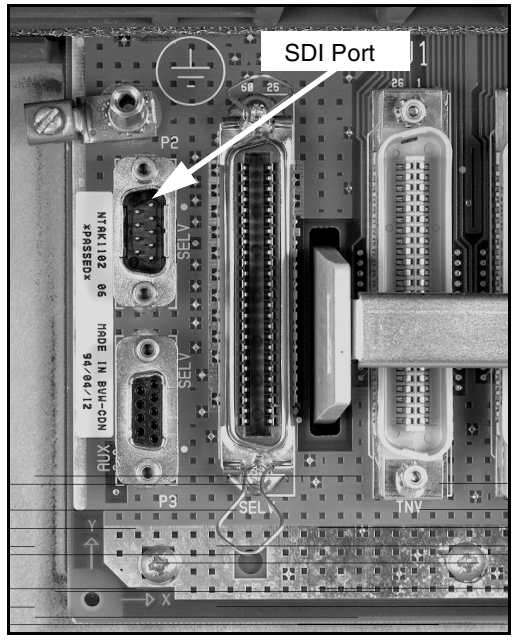
Procedure 3 on page 37 describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C without fiber-optic cabinet interconnection.

Procedure 3
Upgrade without fiber-optic connection to Option 11C

1 Connect a TTY terminal to SDI Port 0 of the existing system.

The terminal must connect to SDI Port 0 (see Figure 6 on page 37).

Figure 6
SDI Port 0



2 Log in to the system and perform a data dump on the existing system.

Note: You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure; if the upgrade fails, you can revert to the earlier system.

a Load overlay program 43 (LD 43).

b Enter command **EDD**.

c Let the data dump finish, then exit LD 43 by entering ****.

3 Load LD 22 and print the ISM parameters. Make a note of the existing parameters.

Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters. The ISM parameters are also on the existing software cartridge.

4 Perform one of the following steps to extract the customer data from the existing system:

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 38.
- If you are using the CCBR feature and a PC, perform the following steps.

a Log in to the existing Option 11.

b Load LD 43 and enter **XBK** to start a configuration data backup.

c At the INFO prompt, enter a name for the file (up to 128 characters).

d After the backup finishes, enter **XVR.** Check the backed up data.

e Exit LD 43 by entering ****.

Note: Refer to *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330) for details about the CCBR feature.

5 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

6 Attach the antistatic wrist strap provided at the bottom of the cabinet to your wrist.

7 Remove the NTAK01 CPU/Conf or NTBK45 System Core card from the cabinet.

8 Set the baud rate switches on the new NTDK20 SSC card to match the settings on one of the following:

- **the NTAK01 CPU/Conf**
- **the removed NTBK45 System Core card**

9 Remove the jumper plug from connector J7 on the component side of the NTDK20 SSC card, as shown in Figure 7 on page 40.

Note: Store the jumper plug carefully. You need it to install an expansion cabinet connected with fiber-optic cable. You need the J7 connector plug to activate the Ethernet capability (which is not available with copper connected cabinets).

CAUTION

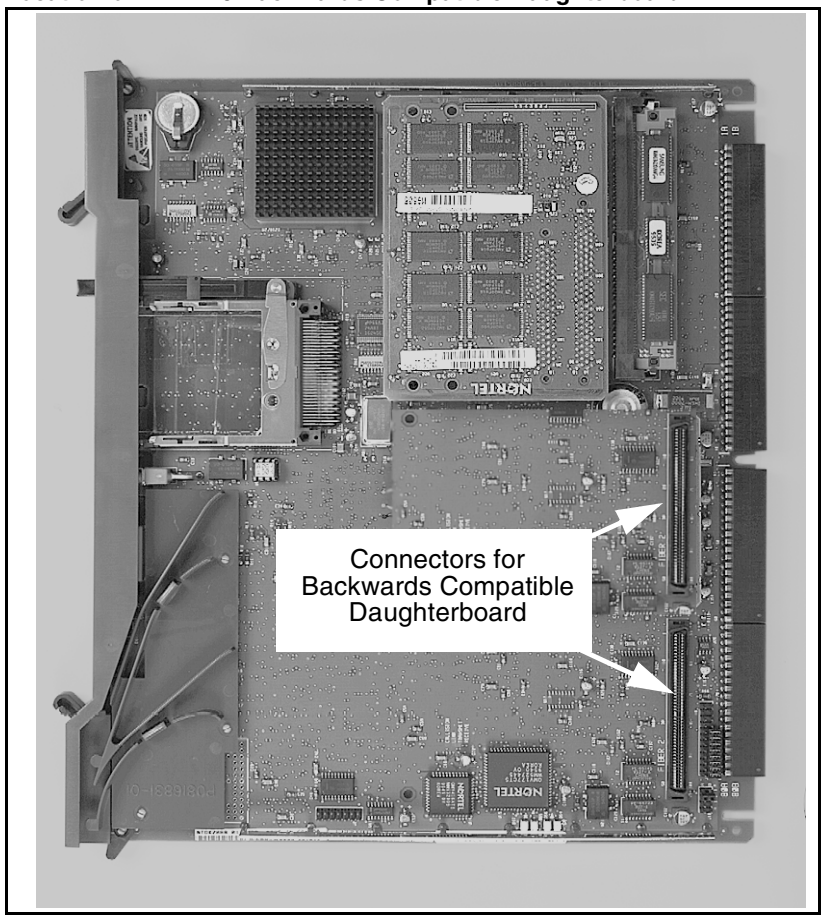
The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

10 Install the NTDK26 Backwards Compatible Daughterboard on the NTDK20 SSC card, as shown in Figure 7 on page 40.

Note: Make sure you have removed the J7 connector plug (see Step 9 on page 39).

11 Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card as shown in Figure 7 on page 40.

Figure 7
Location of NTDK26 Backwards Compatible Daughterboard



12 Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTBK45 card (Slot 0).

13 Extract the customer database from the existing system.

Do one of the following:

- If you are going to use the CCBR feature, skip this step and go to Step 14.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.

a Remove the software cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card.

b Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool.

c Make sure the software cartridge on the Database Upgrade Tool faces towards the left. Then insert it in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.

14 Install the NTBK48 three-port SDI cable to the SDI port.

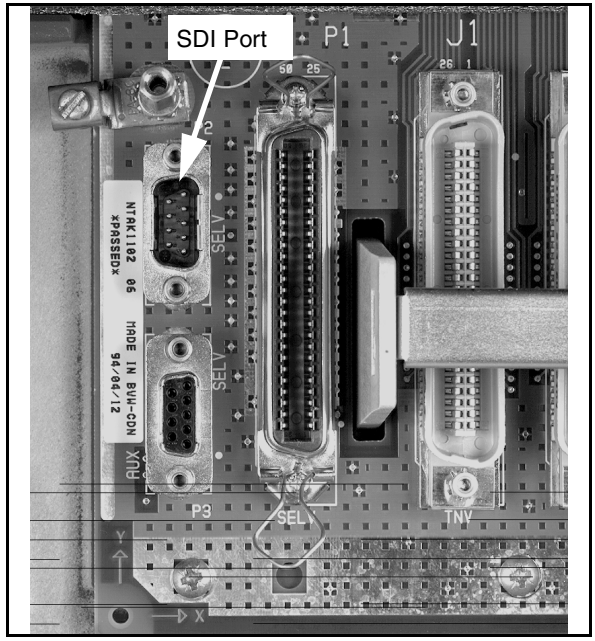
Connect the TTY terminal to the connector on the NTBK48 cable labeled “Port 0” (see Figure 8 on page 41).

Note: This cable is used with the Option 11E system.

CAUTION

The TTY must connect to port 0 to access the Software Installation Program.

Figure 8
Cable connection



15 Connect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

16 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: The Software Installation Program is menu-driven, allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to *Option 11C Planning and Installation* (553-3021-210).

The following is a summary of the steps, as described in *Option 11C Planning and Installation* (553-3021-210).

a If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date not in the range of 1995 to 2095.

b Do one of the following to select the type of upgrade you are performing:

- If using the Software Delivery (PCMCIA) card:

  iSelect **System Upgrade** from the Software Installation Main Menu.

  iiThen, select **Option 11/11E to Option 11C** from the “Select type of upgrade to be performed” menu.

- If you are upgrading using the software daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.

c Select the feature set to be enabled from the “Select Feature Set You Wish to Enable” menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

d Select feature package numbers to add, if any.

Enter package numbers. Press <CR> twice to end package selection.

e Select the database source.

Select one of the following from the "Select Option 11/11E Database Source" list:

- Select **CCBR Restore file** if you extracted the customer database using the CCBR feature. When you select this option, you access the Data Transfer mode. You start the data restoration and upgrade process by pressing <CR> when prompted.
- Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

f Select the ISM parameters.

Compare the ISM parameters with those you got in Step 3. Make any required changes.

g Define the new AUX ID.

The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.

h Confirm the information entered and enter the validation keycodes.

The terminal displays a new installation information summary.

Make any necessary changes to the information. Then, enter the keycodes.

i Complete the software installation when prompted.

CAUTION

If you enter YES, the system reloads (SYSLOAD) to complete the installation.

17 Wait for the software installation to finish.

18 Load LD 43 and perform a data dump.

19 If you need to, change the tone and SDI functions.

The NTDK20 SSC card combines many tone functions. Refer to "Assign TDS/DTR, XTD, and SDI functions" on page 163 for more information.

End of Procedure

Upgrade with fiber-optic connection

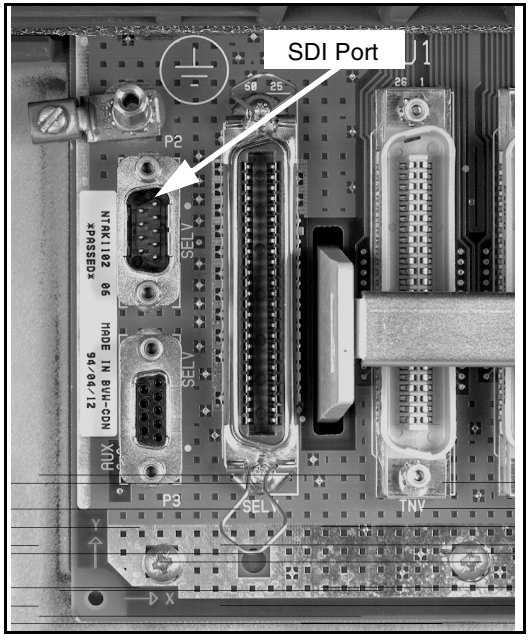
Procedure 4 describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

Procedure 4
Upgrade with fiber-optic connection to Option 11C

1 Connect a TTY terminal to SDI Port 0 of the existing system.

You must connect the terminal to SDI Port 0 (see Figure 9 on page 44).

Figure 9
SDI Port 0



2 Log in to and perform a data dump on the existing system.

You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

a Load LD 43.

b Enter command **EDD**.

c Wait until the data dump finishes.

3 Load LD 22 to print the ISM parameters. Make a note of the existing parameters.

a Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters.

b Make sure the ISM parameters are also on the existing software cartridge.

4 Do one of the following to extract the customer data from the existing system:

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 45.
- If you are using the CCBR feature and a PC, perform the following steps.

a Log in to the existing Option 11.

b Load LD 43, and enter **XBK** to start a configuration data backup.

c At the INFO prompt, enter a name for the file (up to 128 characters).

d After the backup finishes, enter **XVR** to check the backed up data.

e Exit LD 43 by entering ****.

Note: Refer to *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330) for details about the CCBR feature.

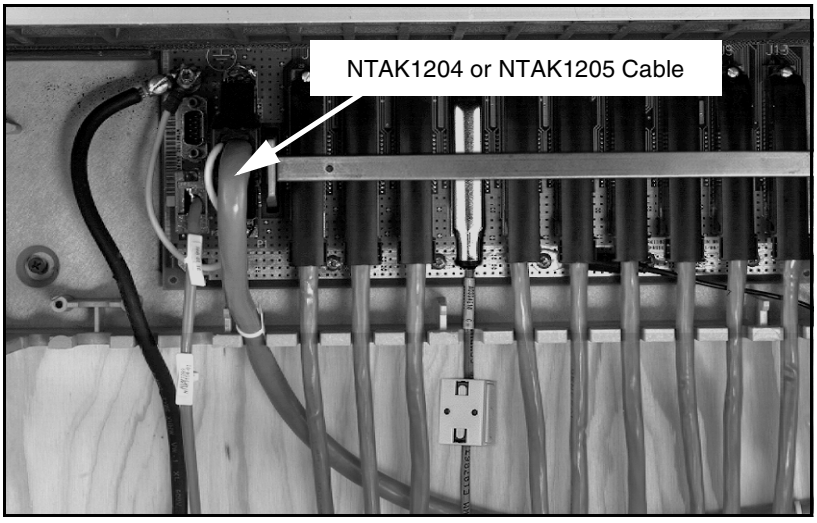
5 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

6 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 10 on page 46).

Figure 10
NTAK1204 or NTAK1205 cable connection



7 Remove the ground connection from the ground lug in the main cabinet.

8 Install a ground block in the area of the main cabinet.

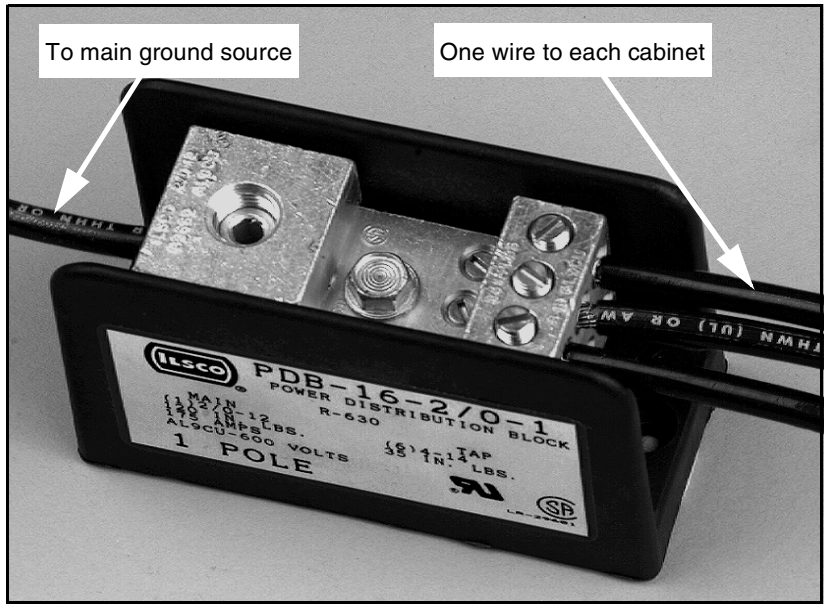
Route the ground wire to the ground block. Install a ground wire from the block to the ground lug in the main cabinet (see Figure 11 on page 47).

Use #6 AWG (40 Metric) ground wire. For more information about grounding, refer to *Option 11C Planning and Installation* (553-3021-210).

Note 1: Grounding methods vary depending on the type of cross-connect terminal used. You do not always need an NTBK80 grounding block (such as with the Krone Test Jack Frame used in some countries). Refer to *Option 11C Planning and Installation* (553-3021-210) for more information.

Note 2: Do not install a ground wire to the existing expansion cabinet. Install a ground wire to the expansion cabinet when the new expansion cabinet is in position.

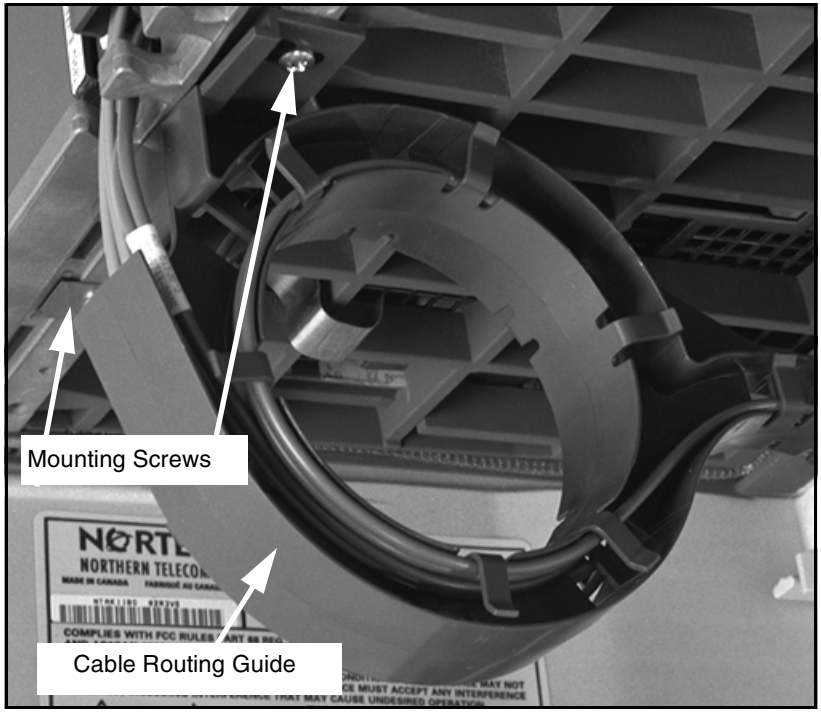
Figure 11
Grounding block



9 Install a P0816832 Fiber Routing Guide or P0888475 Multiple Cable Routing Guide under slot 0 (CPU) as shown in Figure 12.

Install the routing guide in the cable connector area below the circuit cards. Fasten the routing guide with the existing screws below the card slot.

Figure 12
Cable Routing Guide



10 Remove the NTAK01 CPU/Conf or NTBK45 System Core card from the cabinet.

11 Set the baud rate switches on the new NTDK20 SSC card to match the settings on one of the following:

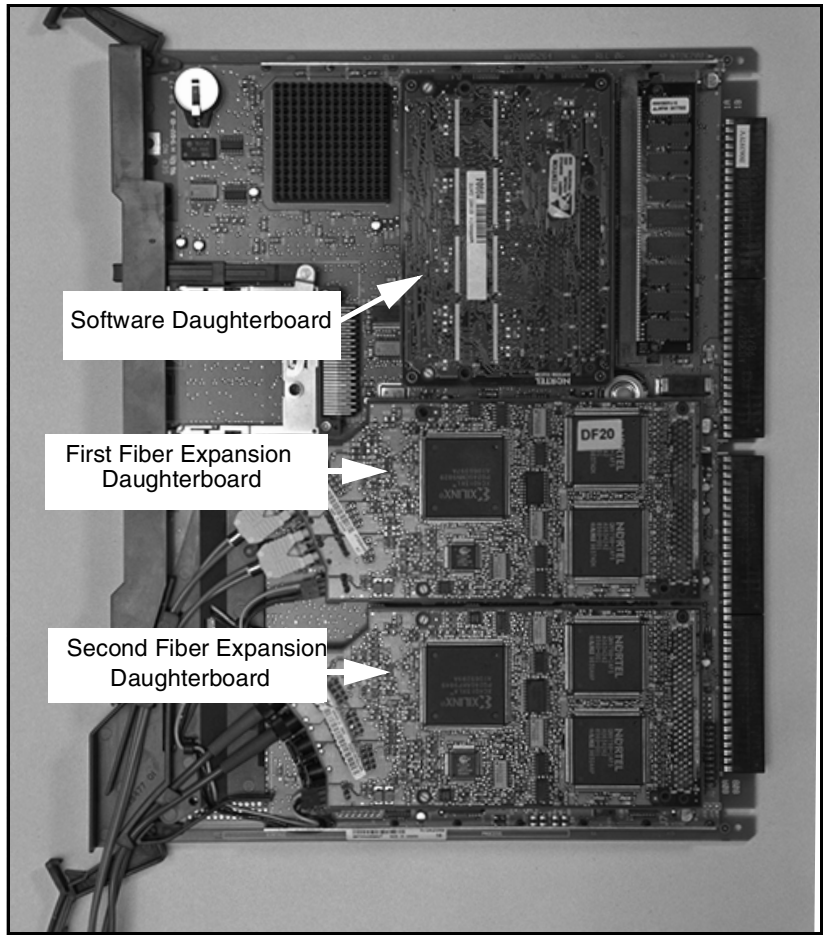
- **the NTAK01 CPU/Conf**
- **the removed NTBK45 System Core card**

12 Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card, as shown in Figure 13 on page 49.

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 13
NTDK20 SSC card



13 Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for the expansion cabinet (see Figure 13 on page 49).

Connect the first Fiber Expansion Daughterboard to the connector labeled “Fiber 1.”

Note 1: Dual port Fiber Expansion Daughterboards that use glass fiber-optic cable can have a glass fiber extension with plugs at each end. (These plugs make installation easier.) Connect the extension to the daughterboard before installing the extension on the SSC card.

Note 2: If you plan to add a second Fiber Expansion Daughterboard as part of the upgrade, do it now to prevent additional downtime later. Install it to the connector labeled "Fiber 2." Refer to *Option 11C Planning and Installation* (553-3021-210) for detailed information about adding expansion cabinets to existing Option 11C systems.

14 Connect the fiber-optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 14 on page 51.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The optical port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- If using the A0632902 (was the A0618443) cable:

a Remove the two protective plugs from the Fiber Expansion Daughterboard.

b Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats tightly. The marking (if there is one) on the connector is not visible when you connect the cable correctly. See Figure 15 on page 52.

- If using glass fiber-optic cable:

a Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

b Insert the plug in its assigned connector on the daughterboard.

c Lock the connector in position by turning it a half turn clockwise. See Figure 16 on page 52.

d Repeat these steps for the second fiber-optic connection.

- If using a glass fiber extension:

aConnect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 14
Fiber-optic cable connections

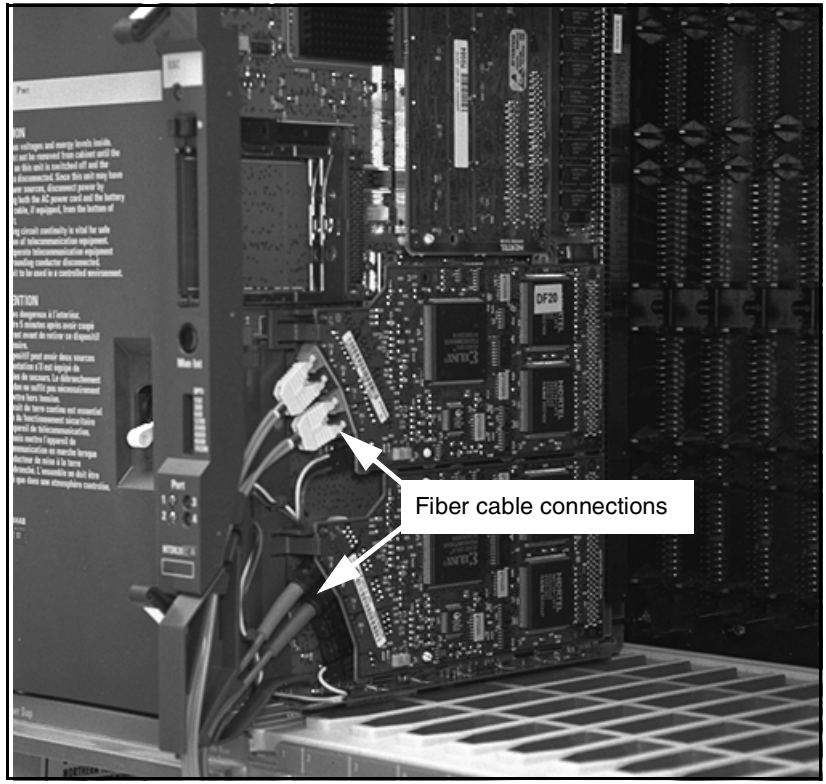


Figure 15
Plastic fiber-optic cable connection

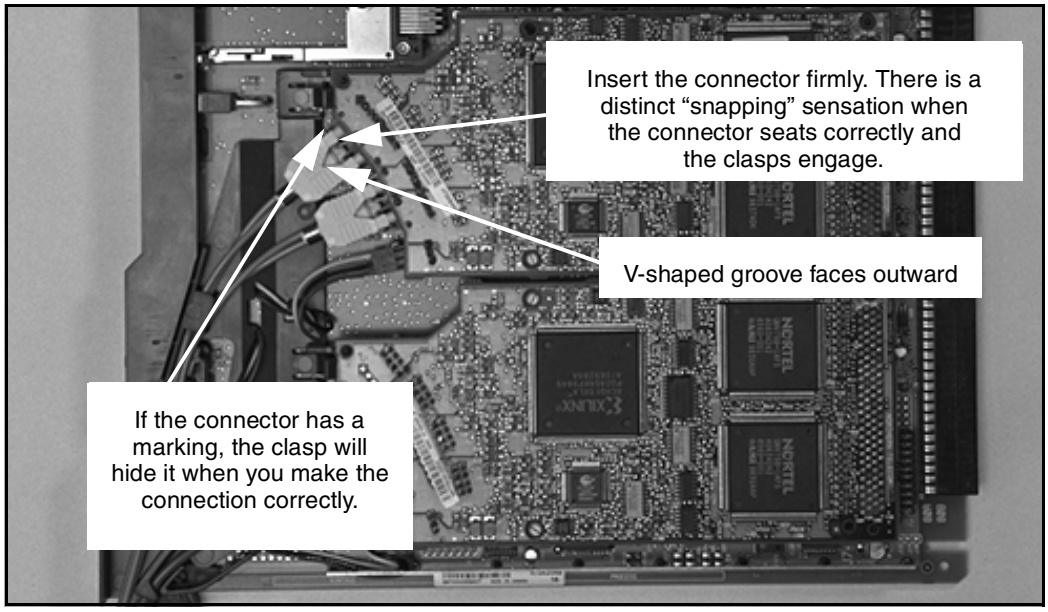
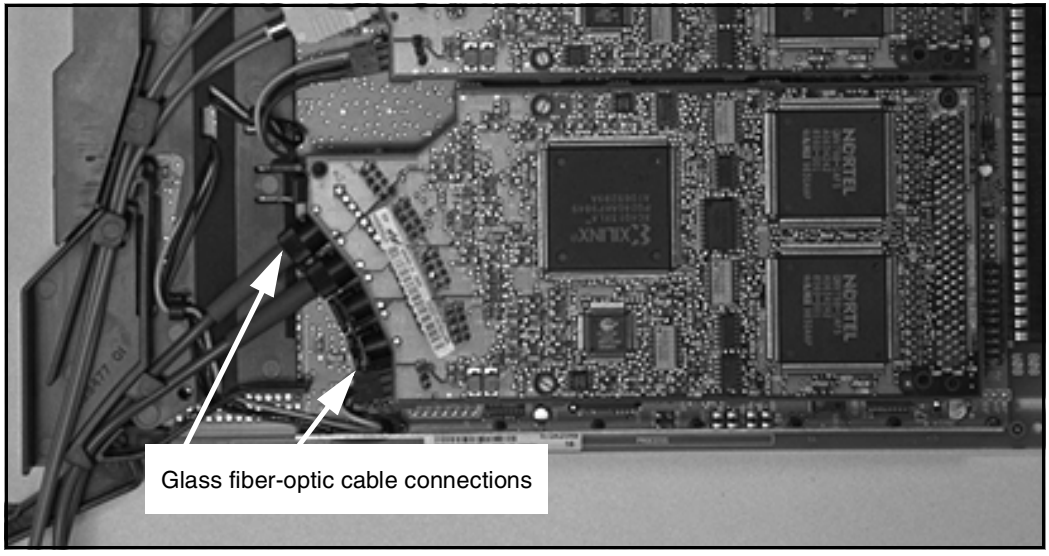

Insert the connector firmly. There is a distinct “snapping” sensation when the connector seats correctly and the clasps engage.
V-shaped groove faces outward
If the connector has a marking, the clasp will hide it when you make the connection correctly.

Figure 16
Glass fiber-optic cable connection



15 Route each fiber-optic cable through the fiber routing guide.

Use an A0632902 (was A0618443) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

You need a glass fiber-optic cable when connecting an expansion cabinet located up to 3 km (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

16 Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTBK45 card (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

17 Do one of the following to extract the customer database from the existing system**:**

- If you are not using the Database Upgrade Tool, skip this step and go to Step 42 on page 65.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.

a Remove the software cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card.

b Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool. See Figure 17 on page 54.

c Position the software cartridge on the Database Upgrade Tool towards the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 18 on page 55.

Figure 17
Database Upgrade Tool

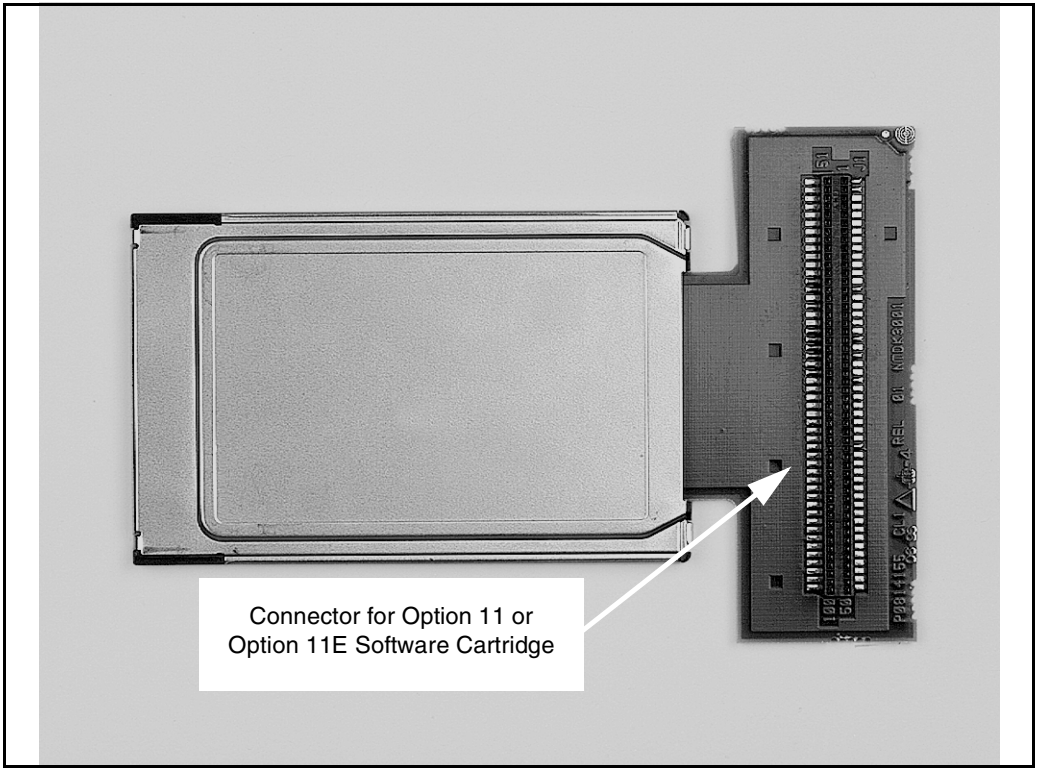
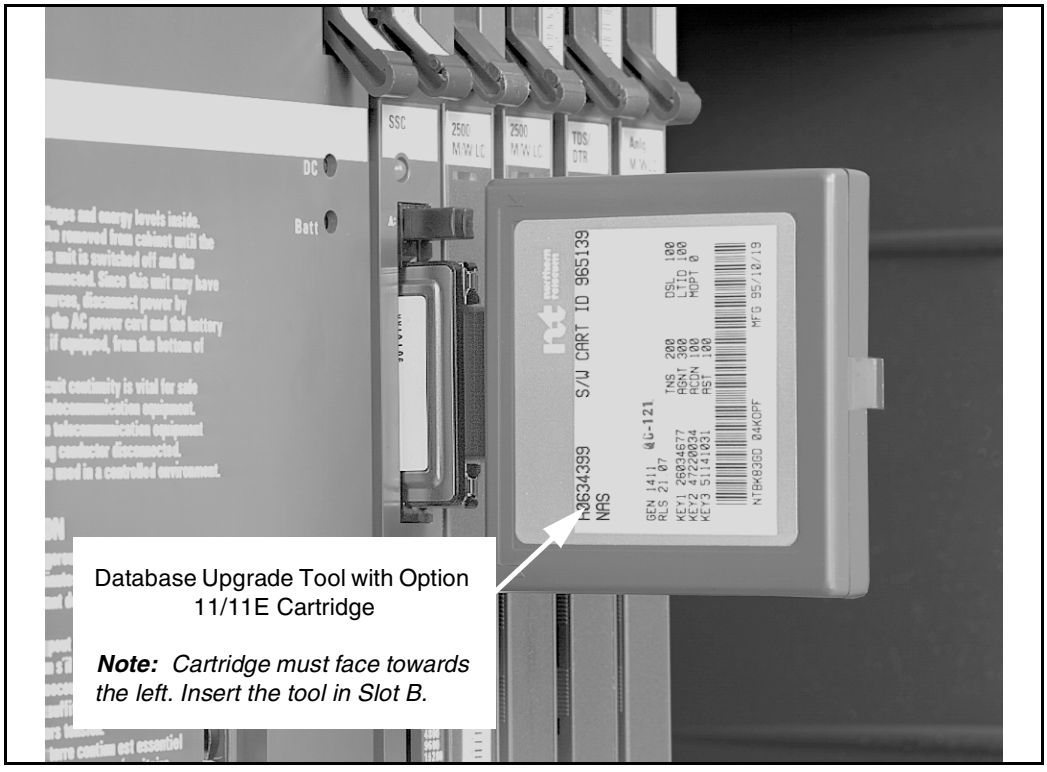


Figure 18
Cartridge and Database Upgrade Tool



18 Install the NTBK48 three-port SDI cable to the SDI port.

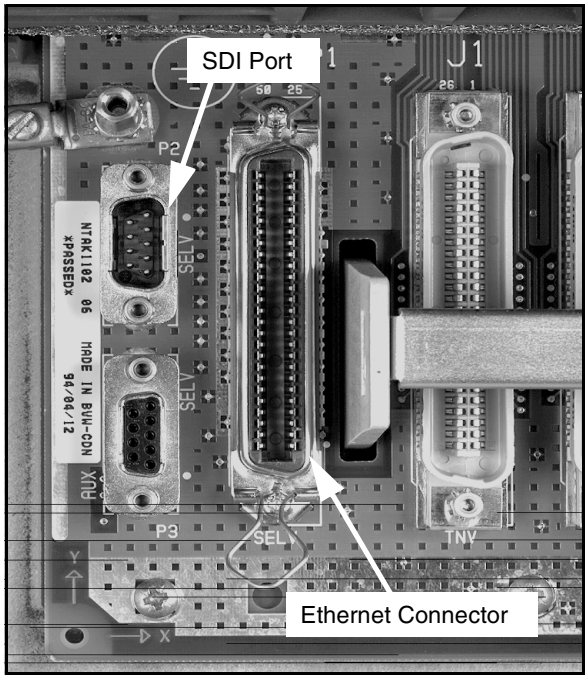
Connect the TTY terminal to the connector on the NTBK48 cable labeled “Port 0” (see Figure 19 on page 56).

Note: Because you use this cable with Option 11E systems, it is present when upgrading from Option 11E.

CAUTION

The TTY must connect to port 0 to access the Software Installation Program.

Figure 19
Cable connection



19 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

20 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: This program is menu-driven allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to *Option 11C Planning and Installation* (553-3021-210).

The following is a summary of the steps described in *Option 11C Planning and Installation* (553-3021-210):

a If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date not in the range of 1995 to 2095.

b Do one of the following to select the type of upgrade:

- If using the Software Delivery (PCMCIA) card:

  iSelect **System Upgrade** from the Software Installation Main Menu.

  ii**Then** select **Option 11/11E to Option 11C** from the "Select type of upgrade to be performed" menu.

- If you are upgrading using the software daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.

c Select the feature set to be enabled from the "Select Feature Set You Wish to Enable" menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

d Select feature package numbers to add, if any.

Enter package numbers. Press <CR> twice to end package selection.

e Select the database source.

Select one of the following from the "Select Option 11/11E Database Source" list:

- Select **CCBR Restore file** if you extracted the customer database using the CCBR feature. When you select this option, you access the Data Transfer mode. You begin the data restoration and upgrading process by pressing <CR> when prompted to do so.

- Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

f Select the ISM parameters.

Compare the ISM parameters with those you got in Step 3. Make any required changes.

g Define the new AUX ID.

The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.

h Confirm the information entered and enter the validation keycodes.

The terminal displays a new installation information summary. Make any necessary changes to the information, then enter the keycodes.

i Complete the software installation when prompted.

21 Wait for the software installation to finish.

CAUTION

If you must terminate the upgrade and revert back to the original Option 11 or Option 11E, do it now (see Procedure 6 on page 80). The remaining steps of this procedure require major equipment changes, making it difficult to revert back.

22 Remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.

23 Select Utilities **from the Software Installation Main Menu and perform a backup.**

24 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.

Tag the cables J11, J12, J13, . . . , J20.

25 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72, or NTDK78 power supply unit in the expansion cabinet.

26 Remove the expansion cabinet from the wall (or pedestal).

Put the cabinet to the side.

27 Install the new NTAK11 cabinet on the wall (or pedestal).

To install the cabinet on a pedestal, first remove the door hinge opening tabs on each side of the cabinet with a pair of pliers. See Figure 20.

Figure 20
Door hinge opening

28 Connect a #6 AWG (40 Metric) ground wire from the ground lug in the expansion cabinet to the grounding block installed in Step 8 on page 46.

29 Install a fiber routing guide under slot 0 (Fbr Rx), as shown in Figure 12 on page 48.

Install the fiber routing guide in the cable connector area below the circuit cards. Fasten the router with the existing screws below the card slot.

30 Connect all the cables that you labeled and disconnected from the old cabinet in Step 24 on page 58.

The connectors in the cabinet for cables going to the cross-connect terminal are J1 to J10 (instead of J11 to J20). Connect the identified cables as shown in Table .

Table 1
Cable tags and connectors

Tag on cable	Connect to connector
J11	J1
J12	J2
J13	J3
J14	J4
J15	J5
J16	J6
J17	J7
J18	J8
J19	J9
J20	J10

31 Route the fiber-optic cable from the main cabinet through the cable entry area of the expansion cabinet.

32 Put on the antistatic wrist strap located in the expansion cabinet.

33 Locate the fiber receiver card.

- Is the expansion cabinet within 10 m (33 ft) of the main cabinet and connected with A0632902 (before A0618443) plastic fiber-optic cable? If so, use an NTDK23 Fiber Receiver card.
- Do you want to connect the expansion cabinet with glass fiber-optic cable up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (Multimode) or NTDK89 (Single Mode) Fiber Receiver card.

34 Connect the fiber-optic cable to the fiber receiver card, as shown in Figure 21 on page 62.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- If using the A0632902 (was A0618443) cable:

a Remove the two protective plugs from the fiber receiver card.

b Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 22 on page 63. The marking (if there is one) on the connector is not visible when you connect it correctly.

- If using glass fiber-optic cable:

a Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

b Insert the plug in its identified connector on the fiber receiver card.

c Lock the connector in position by turning it a half turn clockwise. See Figure 23 on page 64.

d Repeat steps a to c for the second fiber-optic connection.

After you connect the fiber-optic cable, wind the excess fiber-optic cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

Figure 21
Fiber-optic cable (A0632902 shown) connector on the fiber receiver card

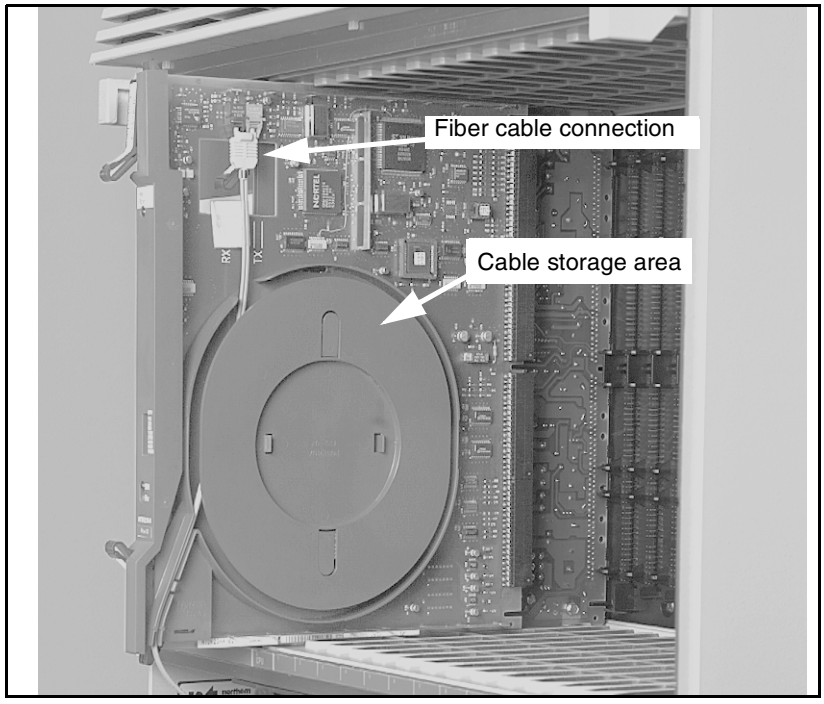


Figure 22
Plastic fiber-optic cable connection

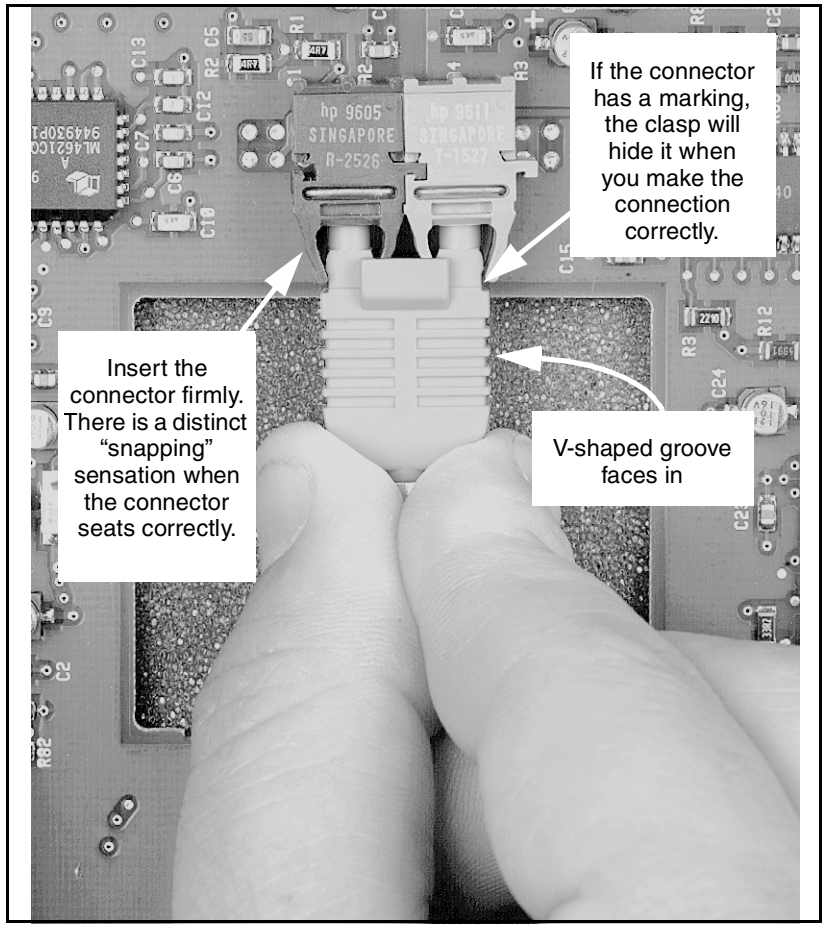
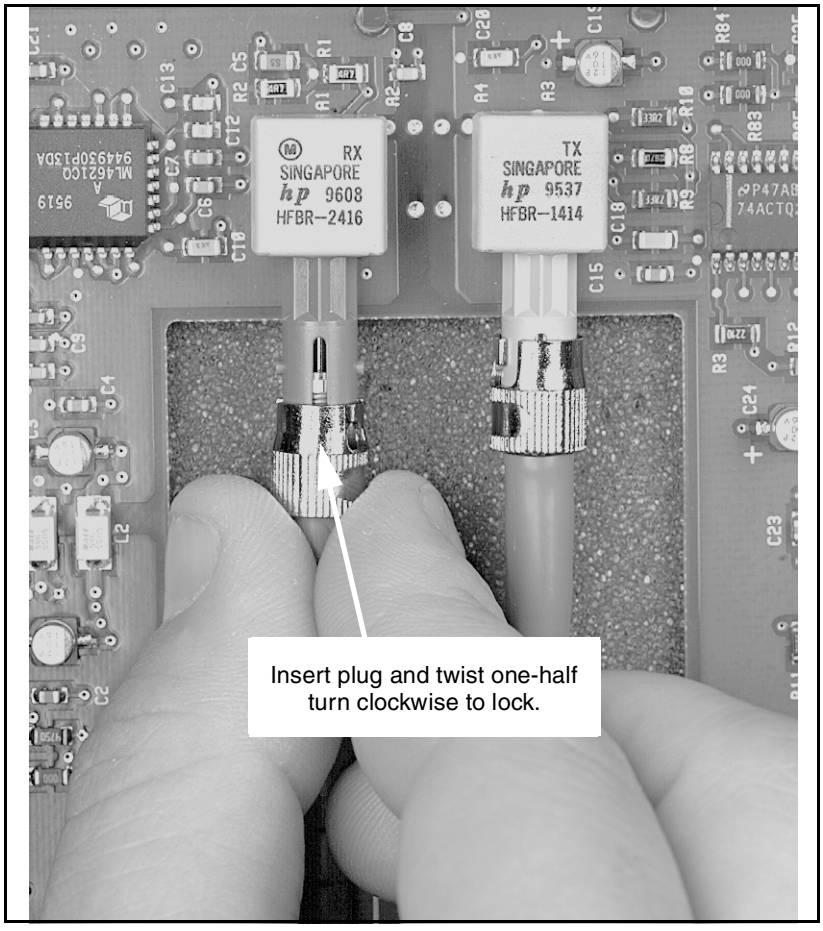

If the connector has a marking, the clasp will hide it when you make the connection correctly.
Insert the connector firmly. There is a distinct “snapping” sensation when the connector seats correctly.
V-shaped groove faces in

Figure 23
Glass fiber-optic cable connection



35 Install the receiver card in the slot labeled "Fbr Rcvr."

Wind the slack fiber-optic cable around the fiber routing guide one time.

36 Remove the NTAK04, NTDK78, NTAK05, or NTDK72 power supply from the old cabinet and install it in the new expansion cabinet. Connect the power cord to the bottom of the power supply unit.

37 Remove any circuit cards that you want to save from the old expansion cabinet. Install these circuit cards in the matching slots in the new cabinet.

38 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

39 Check the fiber-related LEDs on the SSC card.

The LED for the equipped expansion daughterboard is green.

- If the LED shows red (disabled indication):

a Load **LD 135**.

b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).

- If the LED is yellow (fault indication):

a Check all fiber-optic cable. Make sure you connected it correctly and it is not damaged.

b If the LED remains yellow, go to *Option 11C and 11C Mini Fault Clearing* (553-3011-500).

40 If you need to, change the tone and SDI functions.

The NTDK20 SSC card combines many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 163 for more information.

41 If you need to, install the single port TTY cable in the expansion cabinet (Figure 19 on page 56).

42 If you need the optional NTDK27 Ethernet cable, connect it to the expansion connector in the main cabinet. (Refer to Figure 19 on page 56.)

End of Procedure

Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection

You can upgrade a two-cabinet upgraded Option 11C system connected to the expansion cabinet with an NTAK1204 or NTAK1205 cable to a fiber-optic connection. The following procedure (Procedure 5 on page 66) describes this upgrade.

Procedure 5
Upgrade to fiber-optic connection

1 Log in and perform a data dump on the existing system.

You must do this step to make sure you back up any changes made after the last data dump.

a Load LD 43.

b Enter command **EDD**.

c Wait until the data dump finishes.

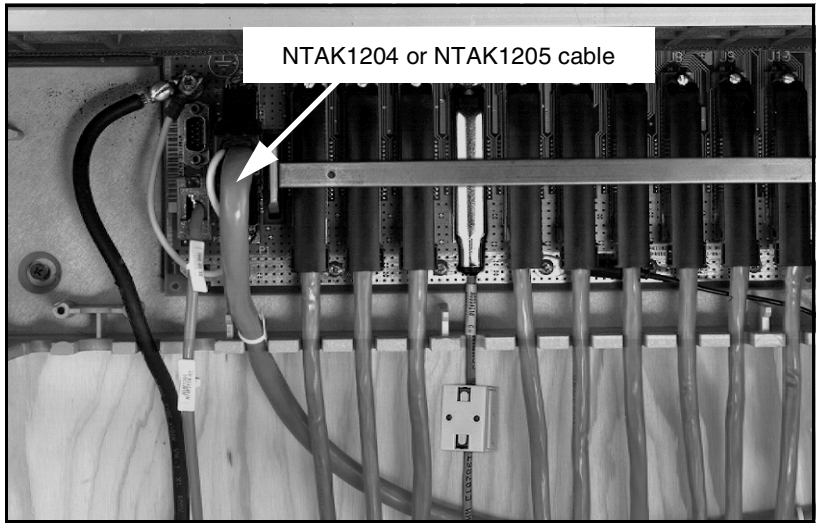
2 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

3 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 24 on page 66).

Figure 24
NTAK1204 or NTAK1205 cable connection



4 Remove the ground connection from the ground lug in the main cabinet.

5 Install a grounding block in the area of the main cabinet.

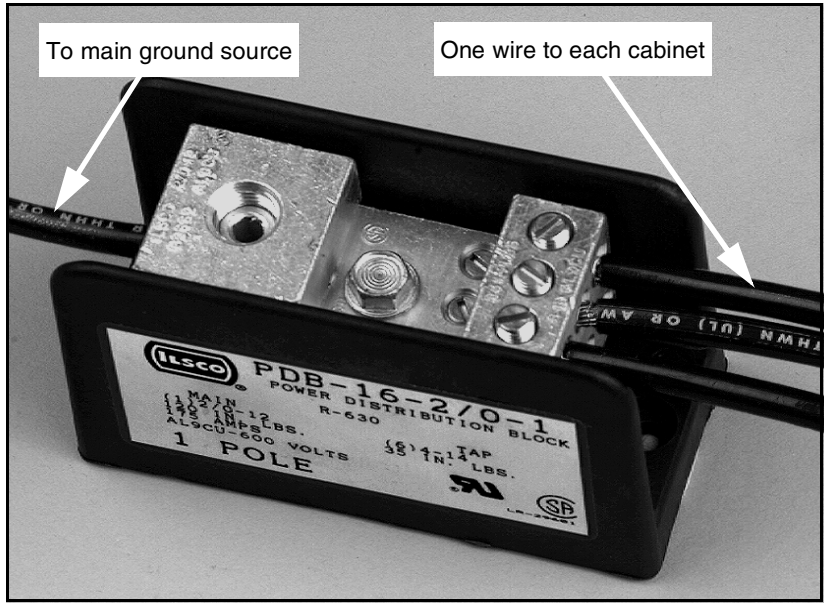
Route the grounding wire to the grounding block, then install a ground wire from the block to the grounding lug in the main cabinet (see Figure 25 on page 67).

Use #6 AWG (40 Metric) ground wire. For more information about grounding, refer to *Option 11C Planning and Installation* (553-3021-210).

Note 1: Grounding methods vary depending on the type of cross-connect terminal used. You do not always need an NTBK80 grounding block (such as with the Krone Test Jack Frame used in some countries). Refer to *Option 11C Planning and Installation* (553-3021-210) for more information.

Note 2: Do not install a grounding wire to the existing expansion cabinet. Install a ground wire when the new expansion cabinet is in position.

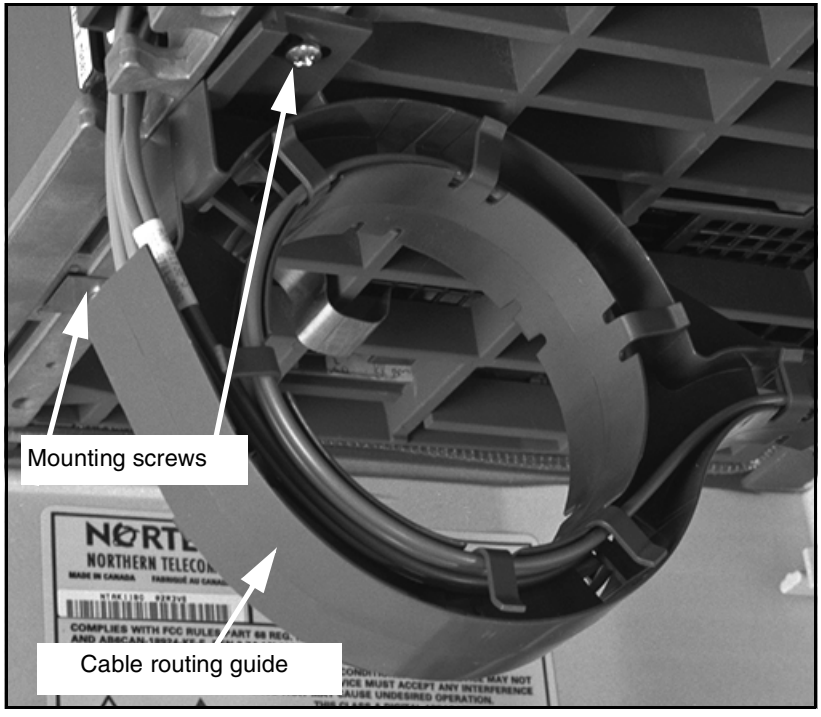
Figure 25
Grounding block



6 Install a cable routing guide under slot 0 (CPU) as shown in Figure 26.

Install the routing guide in the cable connector area below the circuit cards. Fasten the routing guide with the existing screws below the card slot.

Figure 26
Cable Routing Guide



7 Put on the antistatic wrist strap located in the main cabinet.

8 Remove the NTDK20 SSC card from the main cabinet. Then, install a Fiber Expansion Daughterboard for the expansion cabinet (see Figure 27 on page 69).

CAUTION

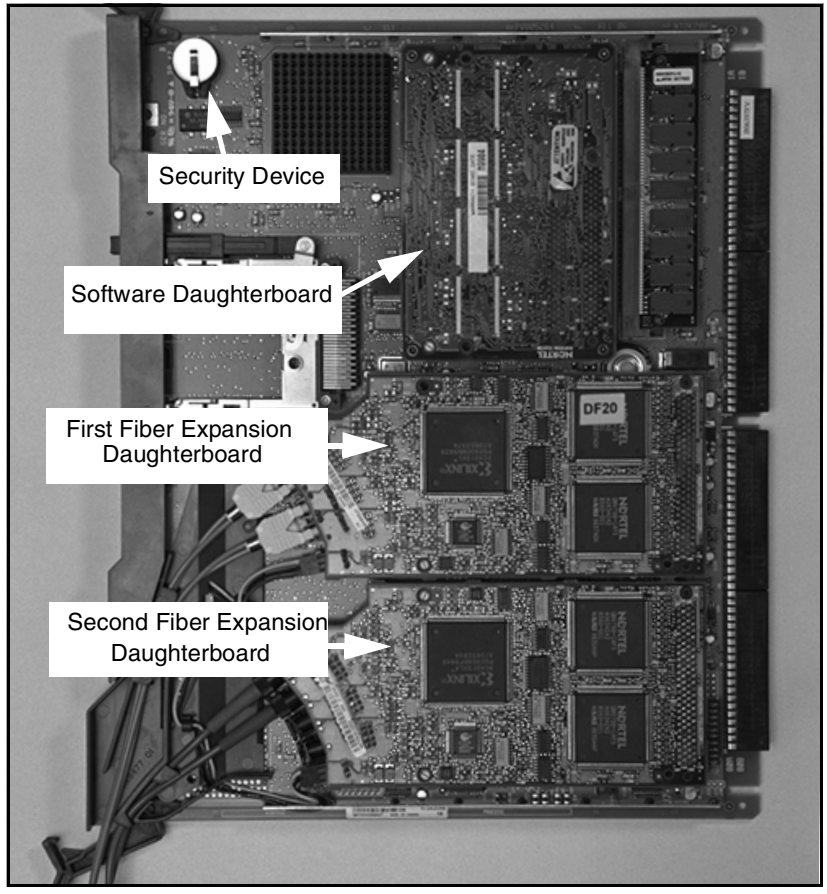
The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Note: Dual port Fiber Expansion Daughterboards that use glass fiber-optic cable can have a glass fiber extension equipped with plugs at each end to make installation easier. Connect the extension to the daughterboard before you install the extension on the SSC card.

a Connect the first Fiber Expansion Daughterboard to the connector labeled “Fiber 1.”

b If you plan to add a second expansion daughterboard as part of the upgrade, install it now. Install it to the connector labeled “Fiber 2” to prevent additional downtime later. Refer to *Option 11C Planning and Installation* (553-3021-210) for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 27
NTDK20 SSC card



9 Connect the fiber-optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 28 on page 71.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If using the A0632902 (was A0618443) cable:**

a Remove the two protective plugs from the Fiber Expansion Daughterboard.

b Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats tightly. The marking (if there is one) on the connector is not visible when you make the correct connection. See Figure 29 on page 72.

- **If using glass fiber-optic cable:**

a Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

b Insert the plug in its identified connector on the daughterboard.

c Lock the connector in position by turning it a half turn clockwise. See Figure 30 on page 73.

d Repeat these steps for the second fiber-optic connection.

- **If using a glass fiber extension:**

Connect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 28
Fiber-optic cable connection on dual port daughterboards

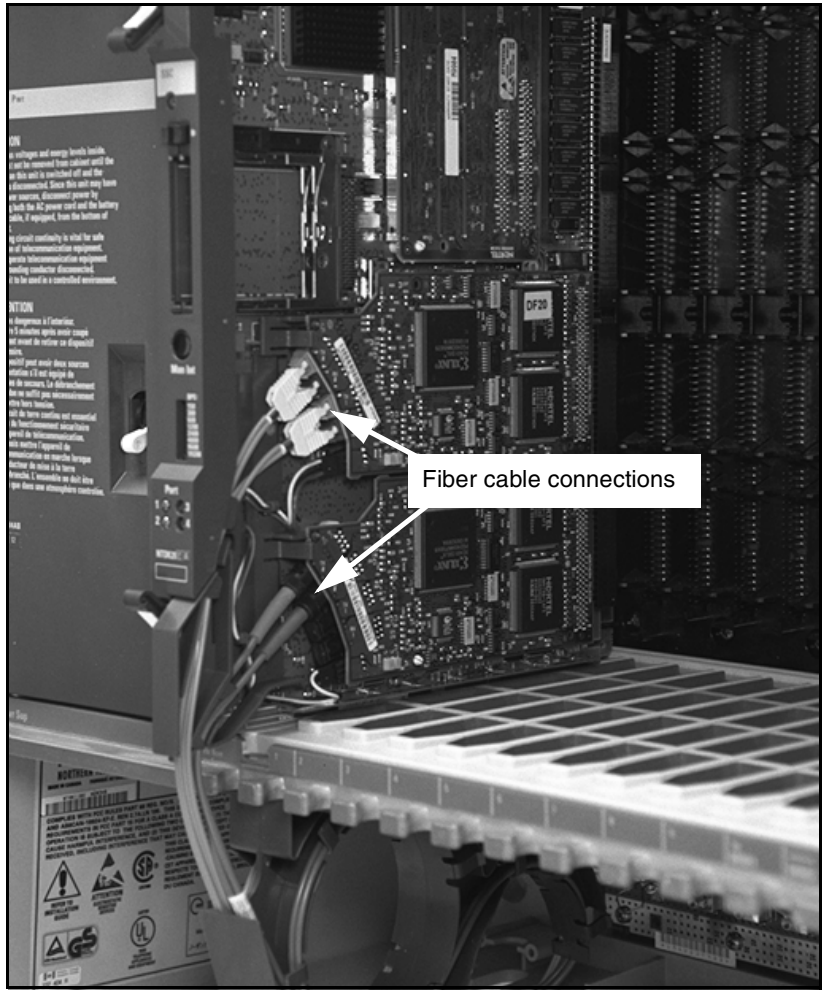


Figure 29
Plastic fiber-optic cable connection

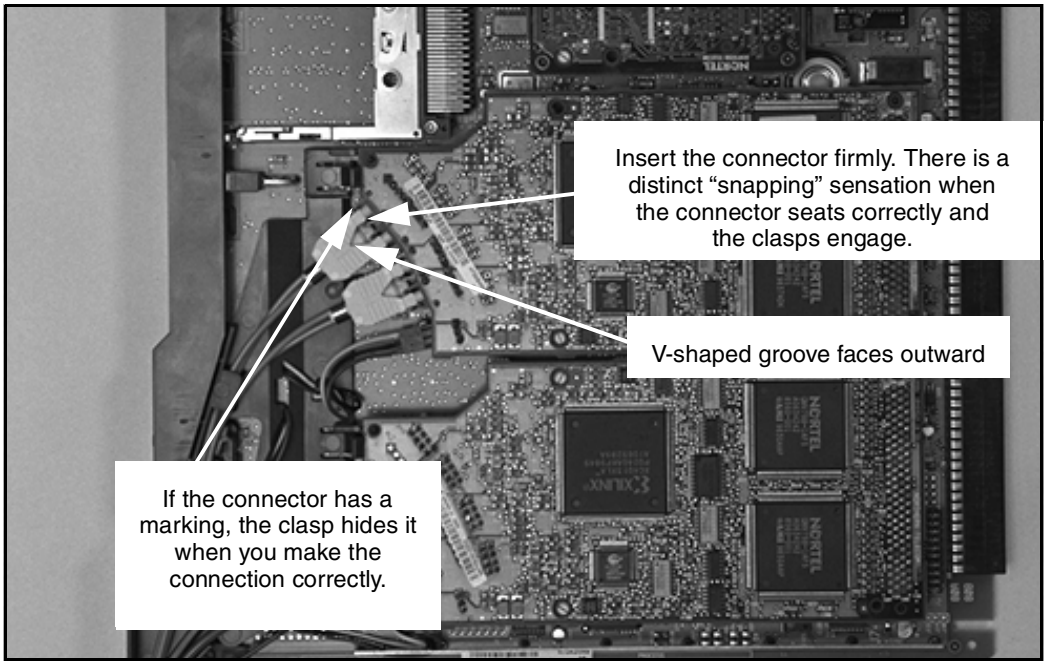
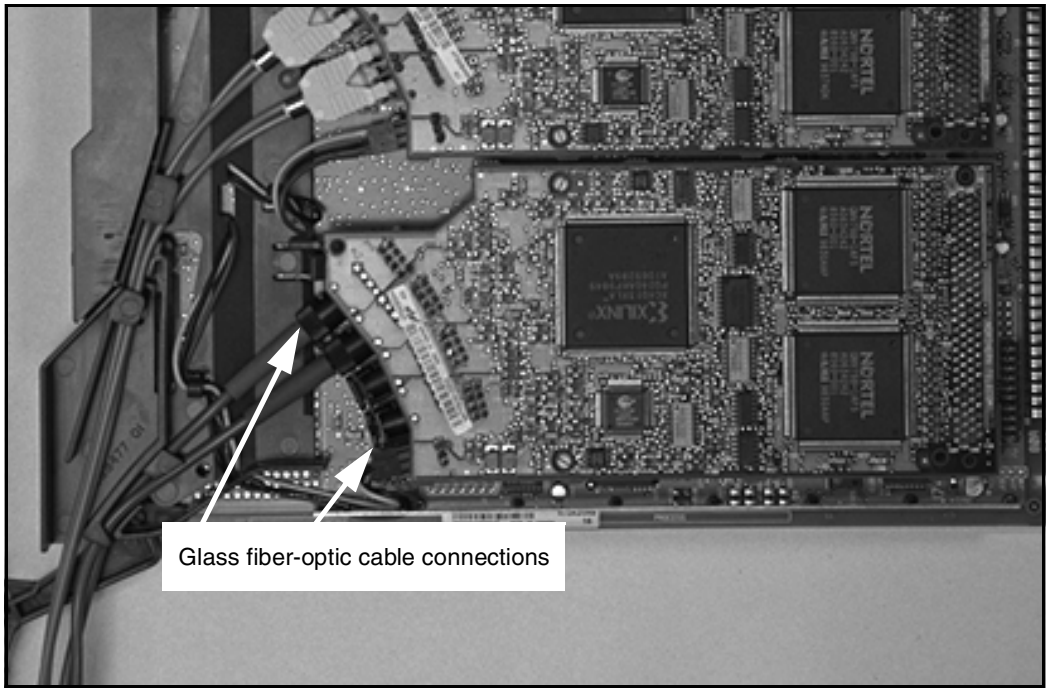

Insert the connector firmly. There is a distinct “snapping” sensation when the connector seats correctly and the clasps engage.
V-shaped groove faces outward
If the connector has a marking, the clasp hides it when you make the connection correctly.

Figure 30
Glass fiber-optic cable connection



10 Route each fiber-optic cable through the fiber routing guide.

Use an A0632902 (was A0618443) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

You need a glass fiber-optic cable to connect an expansion cabinet located up to (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

11 Install the new NTDK20 SSC card in its slot (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

12 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

13 Wait for the system reload (SYSLOAD) to finish.

14 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.

Tag the cables J11, J12, J13, . . ., J20.

15 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72, or NTDK78 power supply unit in the expansion cabinet.

16 Remove the expansion cabinet from the wall (or pedestal).

Put the cabinet to the side.

17 Install the new NTAK11 Cabinet on the wall (or pedestal).

If you plan to install the cabinet on a pedestal, you must first remove the door hinge opening tabs on each side of the cabinet. Use a pair of pliers as shown in Figure 31 on page 74.

Figure 31
Door hinge opening

18 Connect a #6 AWG (40 Metric) grounding wire from the grounding lug in the expansion cabinet to the grounding block installed in Step 5 on page 67.

19 Install a fiber routing guide under slot 0 (Fbr Rx), as shown in Figure 26 on page 68.

Install the fiber routing guide in the cable connector area below the circuit cards. Fasten the router with the existing screws below the card slot.

20 Connect all the cables that you labeled and disconnected from the old cabinet in Step 14 on page 74.

Note: The connectors in the cabinet for cables going to the cross-connect terminal are J1 to J10 (instead of J11 to J20 as in the old expansion cabinet). Connect the labeled cables now as shown in Table 2.

Table 2
Labeled cable connections

Label on cable	Connect to connector
J11	J1
J12	J2
J13	J3
J14	J4
J15	J5
J16	J6
J17	J7
J18	J8
J19	J9
J20	J10

21 Route the fiber-optic cable from the main cabinet through the cable entry area of the expansion cabinet.

22 Wear the antistatic wrist strap located in the expansion cabinet.

23 Locate the fiber receiver card.

- Do you want to connect the expansion cabinet with A0632902 (was A0618443) plastic fiber-optic cable within 10 m (33 ft) of the main cabinet? If so, use an NTDK23 Fiber Receiver card.
- Do you want to connect the expansion cabinet with glass fiber-optic cable up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (multimode) or NTDK89 (single mode) Fiber Receiver card.

24 Connect the fiber-optic cable to the fiber receiver card as shown in Figure 32 on page 77.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If using the A0632902 (was A0618443) cable:**

a Remove the two protective plugs from the fiber receiver card.

b Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 33 on page 78. The marking (if there is one) on the connector is not visible when connected correctly.

- **If using glass fiber-optic cable:**

a Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

b Insert the plug in its identified connector on the fiber receiver card.

c Lock the connector in position by turning it a half turn clockwise. See Figure 34 on page 79.

d Repeat steps a to c for the second fiber-optic connection

After you connect the fiber-optic cable, wind the excess cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

Figure 32
Fiber-optic cable (A0632902 shown) connector on the fiber receiver card

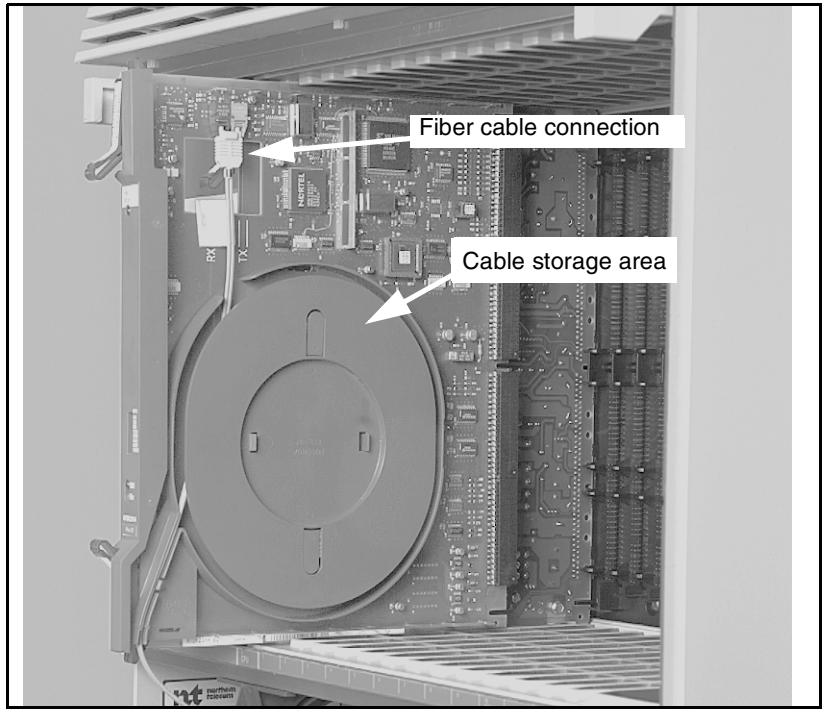


Figure 33
Plastic fiber-optic cable connection

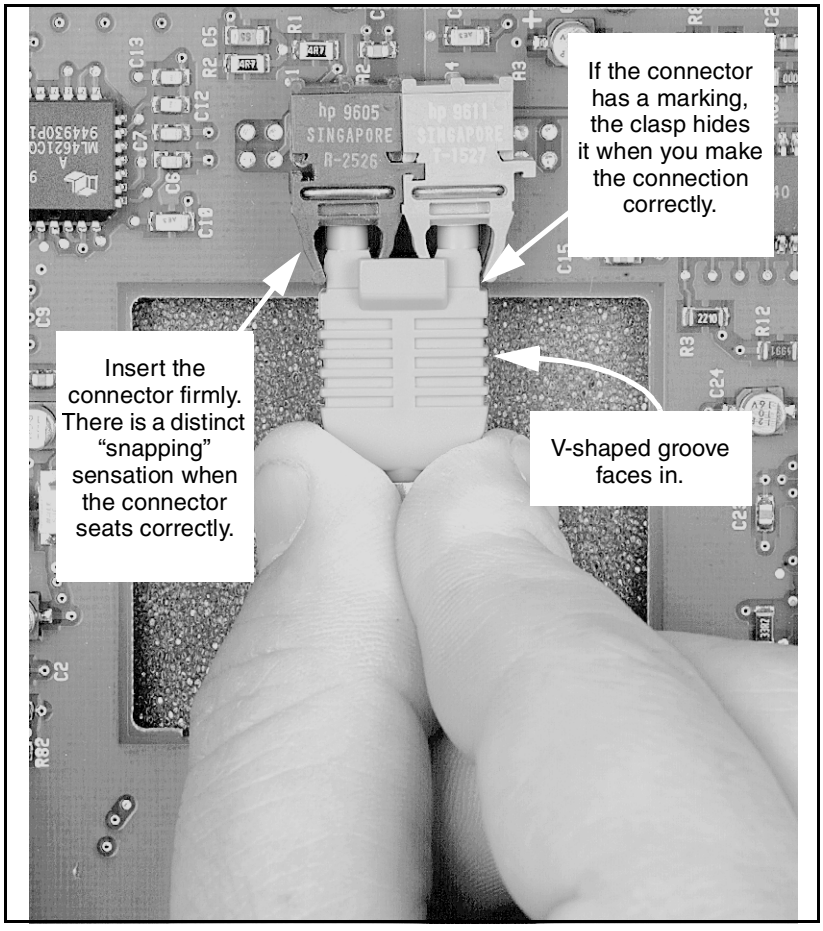
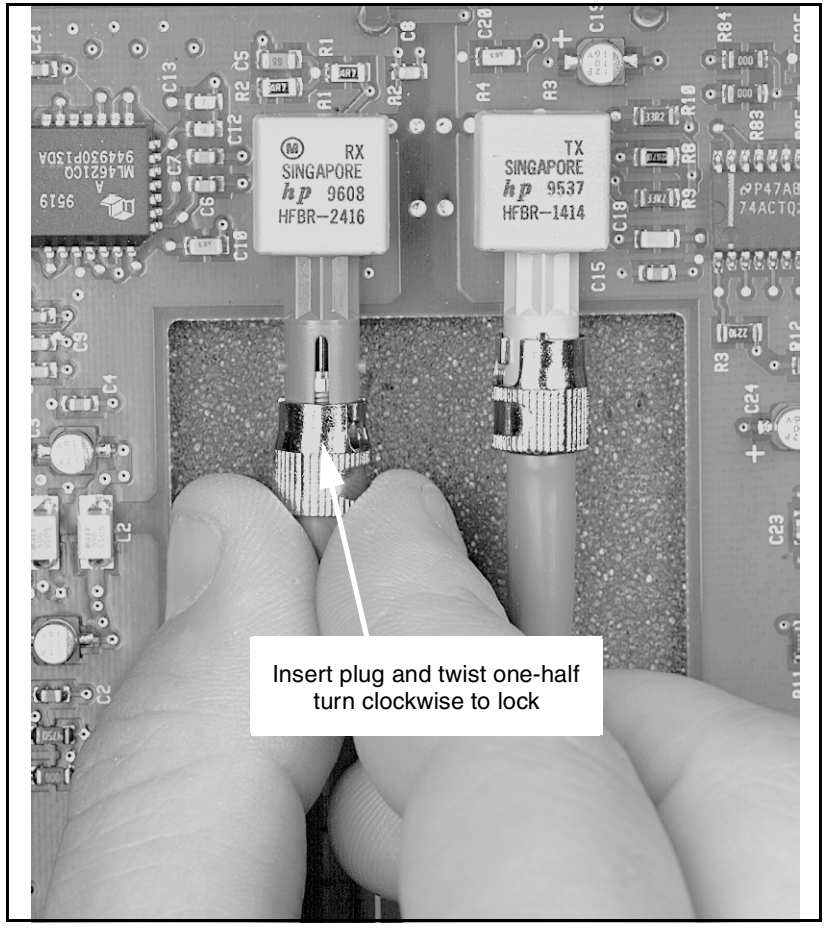

If the connector has a marking, the clasp hides it when you make the connection correctly.
Insert the connector firmly. There is a distinct “snapping” sensation when the connector seats correctly.
V-shaped groove faces in.

Figure 34
Glass fiber-optic cable connection



25 Install the receiver card in the slot labeled "Fbr Rcvr."

Wind the slack fiber-optic cable around the fiber routing guide one time.

26 Remove the NTAK04, NTAK05, NTDK72, or NTDK78 power supply from the old cabinet and install it in the new expansion cabinet.

Connect the power cord to the bottom of the power supply unit.

27 Remove any circuit cards that you want to keep from the old expansion cabinet and install them in the corresponding slots in the new cabinet.

28 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

29 Check the fiber-related LEDs on the SSC card.

- The LED for the equipped expansion daughterboard is green.
- If the LED is red (disabled indication):

a Load overlay program 135.

b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).

- If the LED is yellow (fault indication):

a Check all fiber-optic cable to make sure you connected it correctly and it is not damaged.

b If the LED remains yellow, refer to *Option 11C and 11C Mini Fault Clearing* (553-3011-500).

30 If you need the optional NTDK27 Ethernet cable, connect it to the expansion connector in the main cabinet. Refer to Figure 19 on page 56.

End of Procedure

Restore data because of an upgrade failure

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade fails. To revert back, you must insert one of the following back into slot 0 of the main cabinet and reload the system:

- Option 11 NTAK01 CPU/Conf card
- Option 11E NTBK45 System Core card and the software cartridge

Procedure 6
Revert back to Option 11 or Option 11E

1 Disconnect the power from system.

2 Connect the NTAK1204 or NTAK1205 cable.

3 Remove the NTBK20 SSC card from slot 0 in the main cabinet.

4 **Attach the software cartridge to the NTAK01 CPU/Conf card or NTBK45 System Core card, if you removed it before.**

5 **Insert the NTAK01 CPU/Conf card or the NTBK45 System Core card in slot 0, and power up the system.**

6 **Restore the NTAK1118 SDI cable if your system used it before.**

End of Procedure

Upgrade an Option 11E with fiber-optic cable to Option 11C

Contents

This section contains information on the following topics:

Reference list 83
Summary of items required 84
Upgrade to Option 11C 85
Task summary list 85
Expansion cabinets and other additional equipment 86
Upgrade procedure 86
Restore data because of an upgrade failure 109

Reference list

The following are the references in this section:

- *Option 11C Planning and Installation* (553-3021-210)
- *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330)
- *Option 11C and 11C Mini Fault Clearing* (553-3011-500)

This chapter describes how to upgrade an existing two- or three-cabinet Option 11E interconnected with NTBK78 (A0618443 or A0632902) fiber-optic cables.

Summary of items required

You cannot use the existing NTAK12 expansion cabinets used with the Option 11E with the Option 11C. You must replace these cabinets with NTAK11 cabinets. However, you can keep and use the main cabinet, the power supply, and all IPE circuit cards in the new system.

You need the following items to complete this upgrade:

- NTDK20 Small System Controller (SSC) card

  Note: You need an NTDK20CA or later version of SSC card if you use dual port expansion daughterboards.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:

  — personal computer (PC) equipped with XModem CRC software to run the CCBR feature

  — Database Upgrade Tool (extracts data from the cartridge)

  Note: The PC can be on-site or located remotely.

- NTAK11 cabinet for each existing NTAK12 expansion cabinet
- fiber routing guide for each cabinet
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard
- NTDK79 Single Port or NTDK85 Dual Port Fiber Expansion Daughterboard

  If the expansion cabinet is within 10 m (33 ft) of the main cabinet, use one of the following Fiber Expansion Daughterboards:

  — NTDK22

  — NTDK84

  If you move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet, use one of the following Fiber Expansion Daughterboards:

  — NTDK24 (Multimode)

— NTDK79 (Single Mode)

— NTDK85 (Dual Port)

- NTDK23 Fiber Receiver card

  If the expansion cabinet is within 10 m (33 ft) of the main cabinet, use an NTDK23 Fiber Receiver card. If you move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet, use one of the following fiber receiver cards:

  — NTDK25 (Multimode)

  — NTDK80 (Single Mode)

- A0632902 (was A0618443) Fiber-optic cable (only required with the NTDK22)

  Use this cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). You need a duplex glass fiber-optic cable from a local provider for distances up to 3 km (1.8 mi).

- Software Daughterboard

  You need Release 24 or later software if you are installing dual port expansion daughterboards as part of the upgrade.

- NTDK27 Ethernet cable (optional)
- NTAK1118 Single Port SDI cable for each expansion cabinet (optional).

Upgrade to Option 11C

This section gives a summary of the upgrade steps and the upgrade procedure.

Task summary list

The following is a summary of the tasks in this section to upgrade a two- or three-cabinet Option 11E to Option 11C:

1 Perform a data dump (EDD) on the existing system.

2 Extract the customer data from the existing system using the CCBR feature (unless you are using the Database Upgrade Tool).

3 Disconnect the NTBK78 cable from the main cabinet.

4 Install the NTDK20 Small System Controller (SSC) card with Fiber Expansion Daughterboard.

5 Load the new system software and customer data in the system.

6 Replace the existing expansion cabinets with an NTAK11 cabinets.

7 Connect the expansion cabinet to the main cabinet.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment, such as line cards. If you plan to add expansion cabinets or other equipment as part of the upgrade, complete the upgrade as described in this chapter first. Then, refer to *Option 11C Planning and Installation* (553-3021-210) for information about adding equipment to an existing Option 11C system.

Upgrade procedure

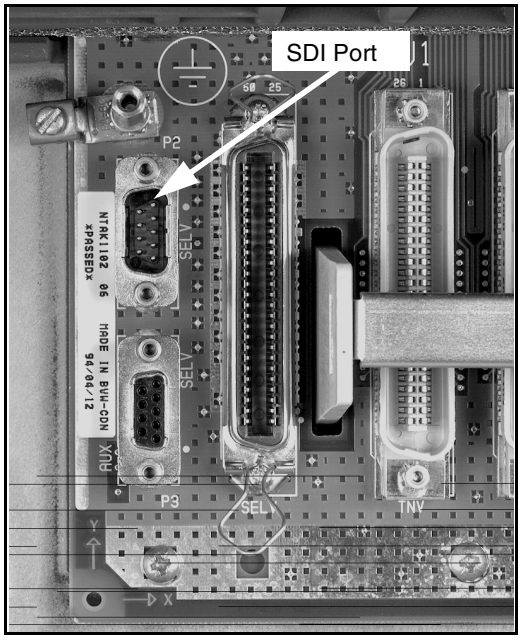
Procedure 7 on page 86 describes how to upgrade a two- or three-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

Procedure 7
Upgrade Option 11E to Option 11C

1 Connect a TTY terminal to SDI Port 0 of the existing system.

CAUTION
The TTY terminal must connect to SDI Port 0 to access the Software Installation Program later in this procedure. See Figure 35 on page 87.

Figure 35
SDI Port 0



2 **Log in to the system and perform a data dump on the existing system.**

You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

a Load LD 43.

b Enter command **EDD**.

c After the data dump finishes, exit LD 43 by entering ****.

3 **Load LD 22 and print the ISM parameters. Make a note of the existing parameters.**

Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters. The ISM parameters are also on the existing software cartridge.

4 Do one of the following to extract the customer data from the existing system:

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 88.
- If you are using the CCBR feature and a PC, perform the following steps.

  1 Log in to the existing Option 11.

  ii Load LD 43 and enter **XBK** to start a configuration data backup.

  iii At the INFO prompt, enter a name for the file (up to 128 characters).

  iv After the backup finishes, enter **XVR** to check the backed up data.

  v Exit LD 43 by entering ****.

Note: Refer to *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330) for details about the CCBR feature.

5 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

6 Disconnect the NTAK78 fiber-optic cables from the MFI unit in the main cabinet (one for each expansion cabinet).

Note: Do not remove this cable. You need it for the new expansion cabinet.

7 Disconnect the NTBK62 fiber power cable from the following units:

- MFI unit
- cable to the battery backup unit (if there is one)
- the power supply unit (under the unit)

8 If the cabinet has battery backup, connect the cable from the battery backup unit directly to the connector on the bottom of the power supply unit.

9 Remove the MFI from the cabinet.

10 Loosen the screws holding the MFI mounting bracket and remove the bracket (see Figure 36 on page 90).

11 Install a cable routing guide in the location left empty by the MFI mounting bracket. Tighten the screws. See Figure 36 on page 90.

12 Remove the NTBK45 System Core card from the main cabinet.

13 Set the baud rate switches on the new NTDK20 SSC card to match the settings on the card you removed. (The removed card is a NTBK45 System Core card.)

14 Install the Software Daughterboard and the Security Device on the NTDK20 SSC card as shown in Figure 38 on page 93.

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

15 Install one or two Fiber Expansion Daughterboards on the NTDK20 SSC card as required (see Figure 38 on page 93).

One single port expansion daughterboard can connect to one expansion cabinet.

One dual port expansion daughterboard can connect to two expansion cabinets.

When you use single port expansion daughterboards, connect the daughterboard in connector “Fiber 1” to expansion cabinet 1. Connect the daughterboard in connector “Fiber 2” to expansion cabinet 2.

When you use dual port expansion daughterboards, connect the daughterboard in connector “Fiber 1” to cabinet 1 (top connection on the daughterboard) and cabinet 3 (bottom connection). Connect the daughterboard in connector “Fiber 2” to cabinet 2 (top connection on the daughterboard) and cabinet 4 (bottom connection on the daughterboard). See Figure 37 on page 91.

Figure 36
Cable Routing Guide

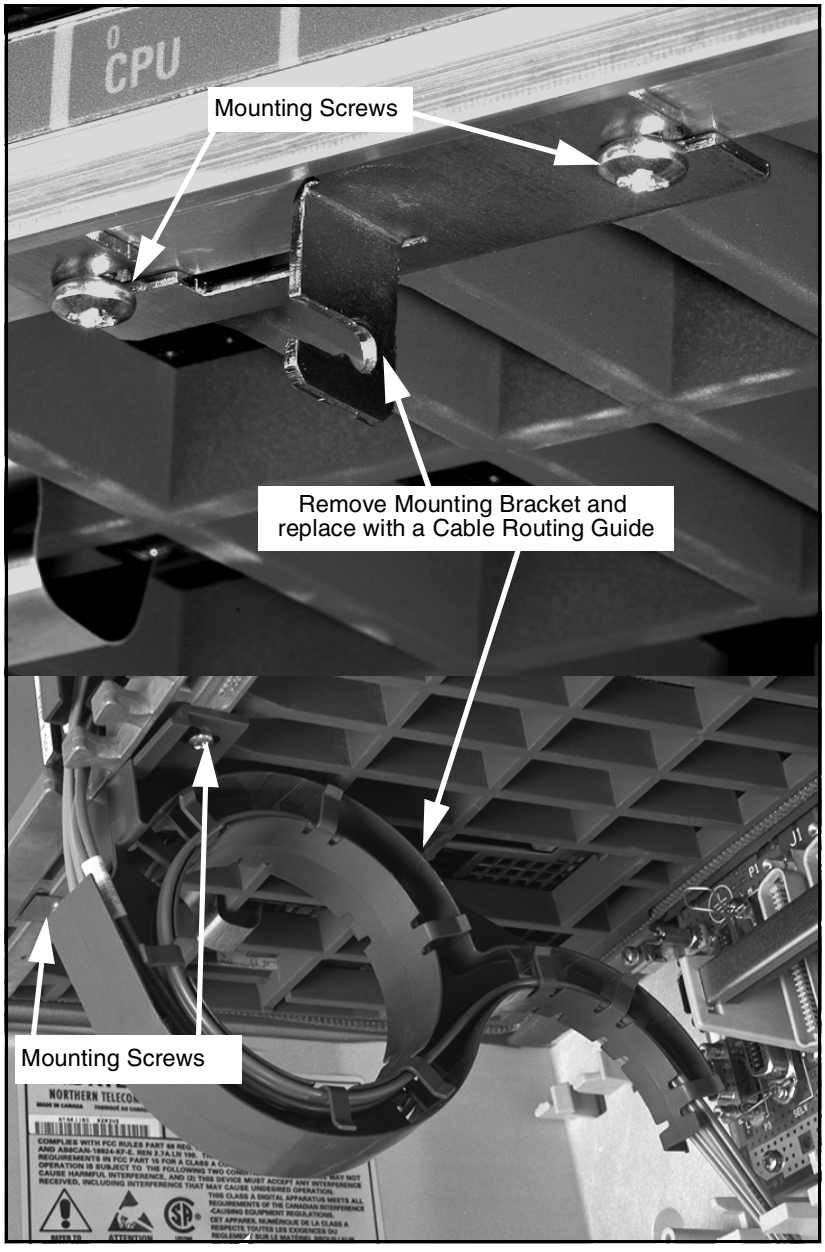
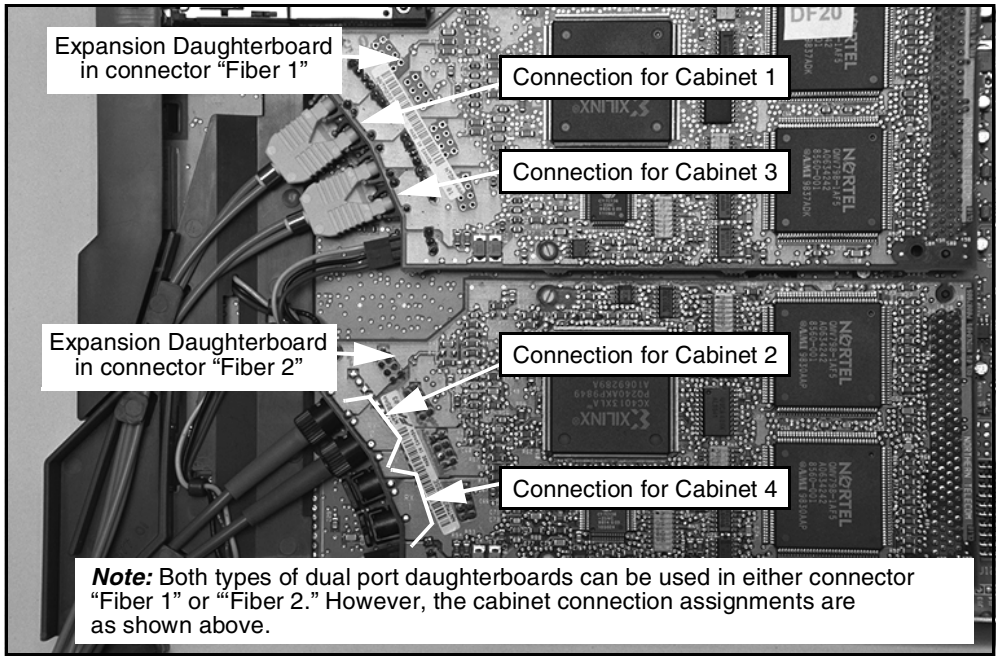


Figure 37
Cabinet assignments on dual port daughterboards


Expansion Daughterboard in connector “Fiber 1”
Connection for Cabinet 1
Connection for Cabinet 3
Expansion Daughterboard in connector “Fiber 2”
Connection for Cabinet 2
Connection for Cabinet 4
Note: Both types of dual port daughterboards can be used in either connector “Fiber 1” or “‘Fiber 2.” However, the cabinet connection assignments are as shown above.

Note: Figure 37 shows both types of daughterboards.

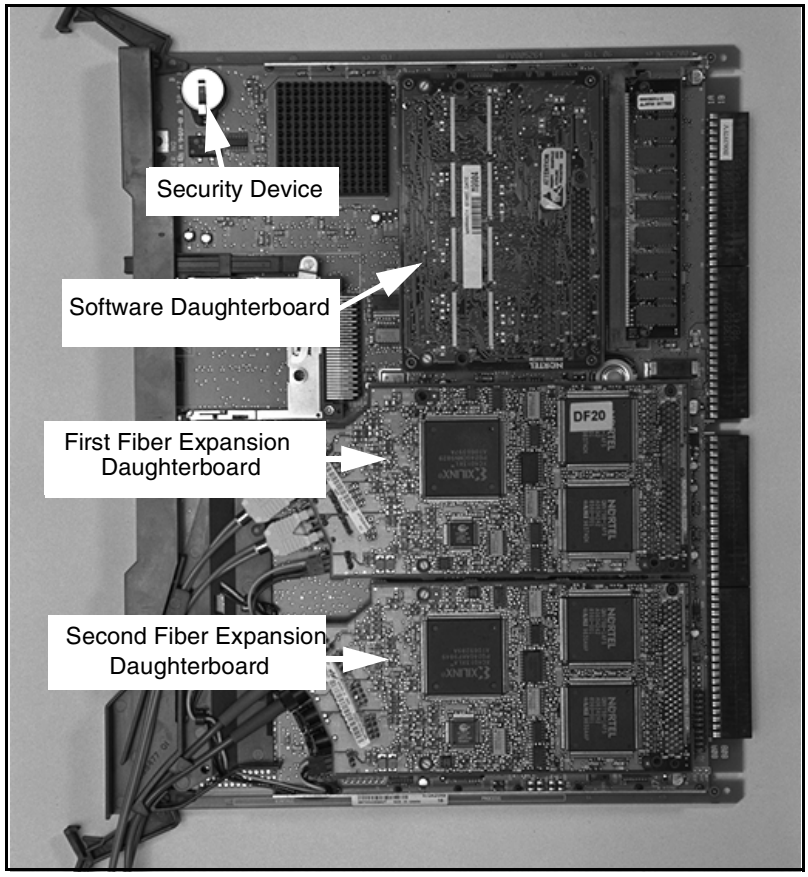
When upgrading a system with two expansion cabinets (three-cabinet system)**,** check the following:

- If you use **single port expansion daughterboards, c**onnect existing expansion cabinet 1 to the daughterboard in connector “Fiber 1” and cabinet 2 to the daughterboard in connector “Fiber 2.”
- If you use **two dual port expansion daughterboards,** connect existing expansion cabinet 1 to the top connection on the daughterboard in connector “Fiber 1.” Connect cabinet 2 to the top connection on the daughterboard in connector “Fiber 2.”
- **If you use one dual port expansion daughterboard,** connect existing expansion cabinet 1 to the top connection on the daughterboard in connector “Fiber 1.” Connect cabinet 2 to the bottom connection on the same daughterboard. The existing cabinet 2 becomes cabinet 3. You must reassign the services that slots 21 to 30 provided to slots 31 to 40 in the upgraded system.

- **If you use one dual-port and one single-port expansion daughterboard,** replace the single port daughterboard in connector “Fiber 1” with a dual port expansion daughterboard. Connect the existing expansion cabinet 1 to the top connection in the dual port daughterboard. Leave existing connection for expansion cabinet 2 connected to the single port daughterboard in connector “Fiber 2.”

Note: If you plan to add additional expansion cabinets, install a second expansion daughterboard now (if you need it) to the connector labeled “Fiber 2.” Doing this step now prevents additional downtime later. Refer to *Option 11C Planning and Installation* (553-3021-210) for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 38
NTDK20 SSC card



16 Connect each fiber-optic cable to the connector on the Fiber Expansion Daughterboard, as shown in Figure 39 on page 95.

WARNING

Use of the fiber-optic interface product in Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If using the NTBK78 (A0618443 or A0632902) cable:**

  1 Remove the two protective plugs from the Fiber Expansion Daughterboard.

  ii Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats completely. The marking (if there is one) on the connector is not visible when you make the connection correctly. See Figure 40 on page 96.

- **If using glass fiber-optic cable:**

  1 Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

  ii Insert the plug in its assigned connector on the daughterboard.

  iii Lock the connector in position by turning it a half turn clockwise. See Figure 41 on page 97.

  iv Repeat these steps for the second fiber-optic connection.

- **If using a glass fiber extension:**

  Connect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 39
Fiber-optic cable connections

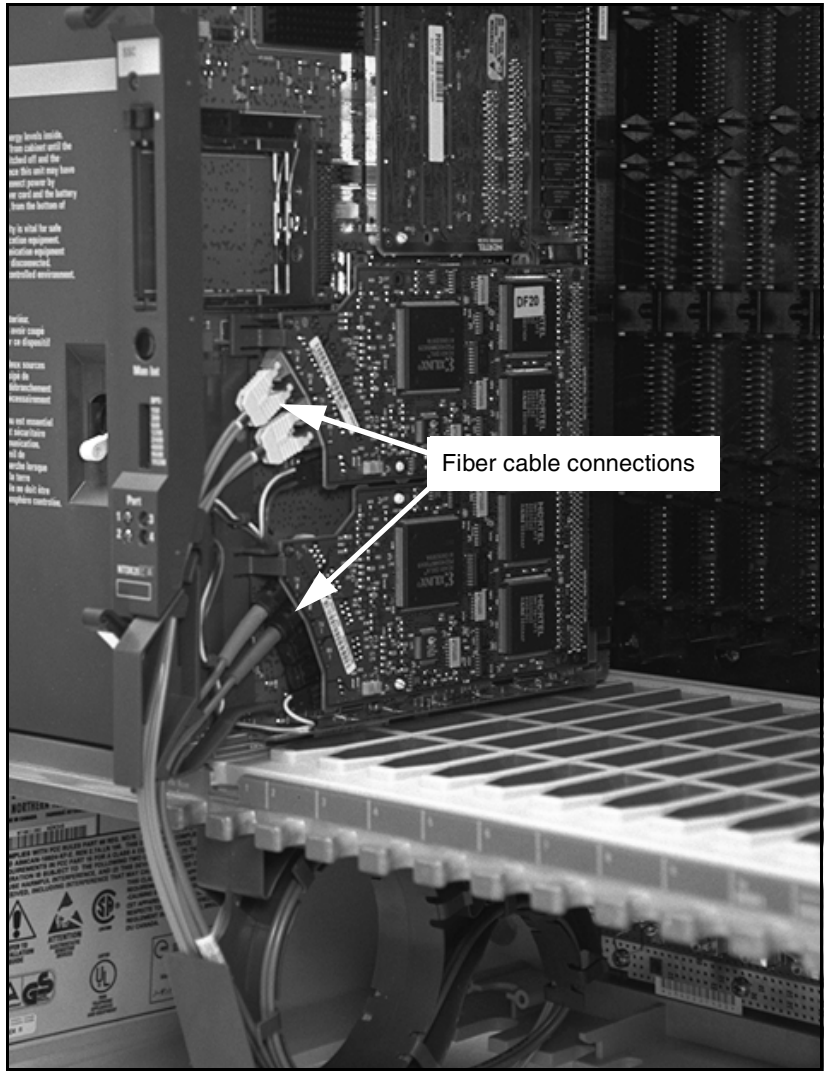
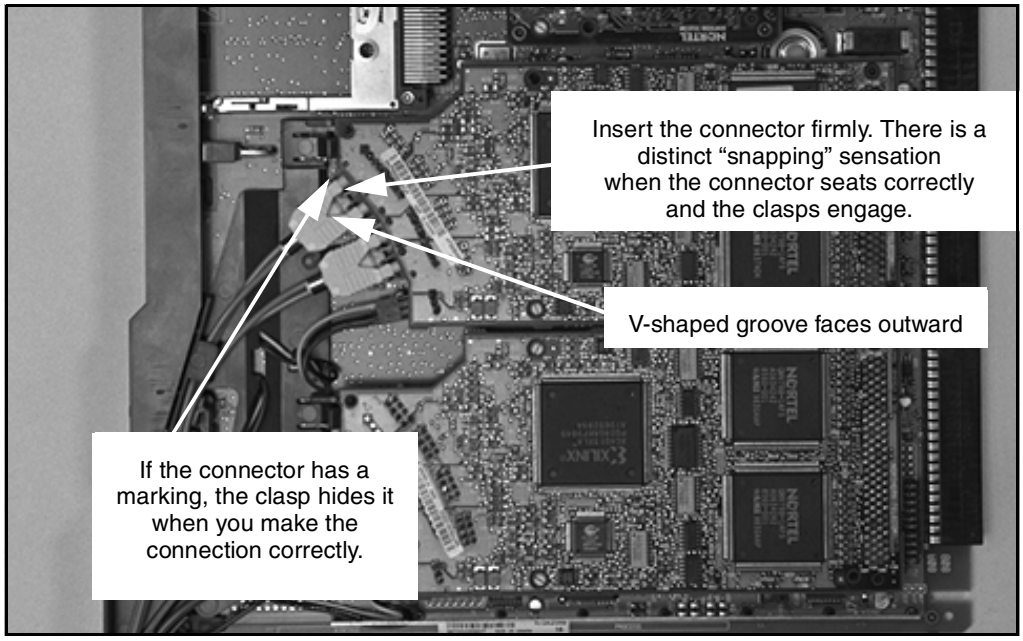


Figure 40
Plastic Fiber-optic Cable Connection


Insert the connector firmly. There is a distinct “snapping” sensation when the connector seats correctly and the clasps engage.
V-shaped groove faces outward
If the connector has a marking, the clasp hides it when you make the connection correctly.

17 Route each fiber-optic cable through the fiber routing guide.

Use an NTBK78 (A0632902) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

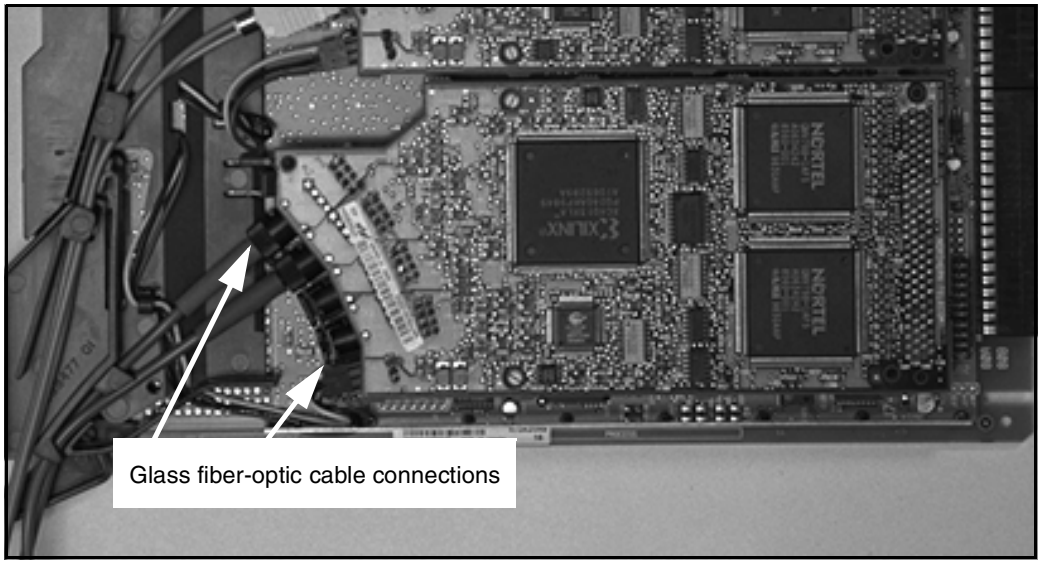
You need a glass fiber-optic cable to connect an expansion cabinet located up to 3 km (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

18 Install the new NTDK20 SSC card in the slot left empty by the NTBK45 card (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

Figure 41
Glass fiber-optic cable connection



19 Do one of the following to extract the customer database from the existing system:

- If you are not using the Database Upgrade Tool, skip this step and go to Step 20 on page 97.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.

v Remove the software cartridge from the existing NTBK45 System Core card.

vi Connect the Option 11E software cartridge to the connector on the Database Upgrade Tool.

vii Position the software cartridge on the Database Upgrade Tool towards the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.

20 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

21 Observe the terminal screen.

When you power up, the Software Installation Program automatically starts.

Note: This program is menu-driven allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to "Upgrade the software" on page 179.

The following is a summary of the steps described in "Upgrade the software" on page 179:

a If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date that is not in the range of 1995 to 2095.

b Do one of the following to select the type of upgrade:

- If using the Software Delivery (PCMCIA) card:

iii Select **System Upgrade** from the Software Installation Main Menu.

iv Select **Option 11/11E to Option 11C** from the "Select type of upgrade to be performed" menu.

- If you are using the Software Daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.

e Select the feature set to be enabled from the "Select Feature Set You Wish to Enable" menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

f Select feature package numbers to add, if any.

Enter package numbers. Press <CR> twice to end package selection.

g Select the database source.

Select one of the following from the "Select Option 11/11E Database Source" list:

- Select **CCBR Restore file** if you extracted the customer database using the CCBR feature. When you select this option, you access the Data Transfer mode. You begin the data restoration and upgrade process by pressing <CR> when prompted to do so.
- Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

h Select the ISM parameters.

Compare the ISM parameters with those you printed in Step 3. Make any required changes.

i Define the new AUX ID.

The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.

j Confirm the information entered and enter the validation keycodes.

The terminal displays a new installation information summary. Make any necessary changes to the information. Enter the keycodes.

k Complete the software installation when prompted.

22 Wait for the software installation to finish.

CAUTION

If for any reason you must terminate the upgrade and revert back to the original Option 11E, terminate now (see Procedure 8 on page 109). The remaining steps of this procedure require major equipment changes, making it difficult to revert back.

23 If you installed it, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.

24 Load LD 43 and perform a data dump.

25 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72, or NTDK78 power supply unit in each expansion cabinet.

26 Tag and disconnect all cables from connectors J11 through J20 in the first expansion cabinet. If there is a second expansion cabinet, do the same for that cabinet.

Tag the cables J11, J12, J13, . . ., J20 for the first expansion cabinet and J21, J22, . . ., J30 for the second cabinet.

27 Disconnect the NTBK78 (A0618443 or A0632902) fiber-optic cable from EFI units in the expansion cabinets.

28 Remove the expansion cabinets from the wall (or pedestal).

Put the cabinets to the side.

29 Install the new NTAK11 cabinets on the wall (or pedestal).

If you plan to install the cabinet on a pedestal, first remove the door hinge opening tabs on each side of the cabinet. Use a pair of pliers, as shown in Figure 42 on page 100.

Figure 42
Door hinge opening

30 Install a fiber routing guide in each expansion cabinet under slot 0 (Fbr Rx), as shown in Figure 43 on page 105.

31 Connect all the cables that you labeled and disconnected from the old cabinets in Step 26 on page 100.

Note: The connectors in the main and expansion cabinets for cables going to the cross-connect terminal have numbers J1 to J10 (instead of J11 to J20 in the old expansion cabinets).

When upgrading a system with two expansion cabinets (three-cabinet system) make sure of the following:

- If you use a **single port expansion daughterboard, c**onnect existing expansion cabinet 1 to the daughterboard in connector "Fiber 1" and cabinet 2 to the daughterboard in connector "Fiber 2." Make sure you have labeled and connected the cables, as shown in Table 3.
- If you use **two dual port expansion daughterboards,** connect the first expansion cabinet 1 to the top connection on the daughterboard in connector "Fiber 1." Connect cabinet 2 to the top connection on the daughterboard in connector "Fiber 2." Make sure you have labeled and connected the cables from the expansion cabinets as shown in Table 3 on page 102
- **If you use one dual port expansion daughterboard,** connect the first expansion cabinet 1 to the top connection on the daughterboard in connector "Fiber 1." Connect cabinet 2 (the existing expansion cabinet) to the bottom connection on the daughterboard in connector "Fiber 2." The existing cabinet 2 becomes cabinet 3.

Table 3
Labeled cable connections — main and expansion cabinet 2

Expansion Cabinet 1	
Label on cable	**Connect to connector**
J11	J1
J12	J2
J13	J3
J14	J4
J15	J5
J16	J6
J17	J7
J18	J8
J19	J9
J20	J10

Expansion Cabinet 2	
Label on cable	**Connect to connector**
J21	J1
J22	J2
J23	J3
J24	J4
J25	J5
J26	J6
J27	J7
J28	J8
J29	J9
J30	J10

Label and connect the cables as shown in Table 4

Table 4
Labeled cable connections — Cabinet 2 assigned as Cabinet 3

Expansion Cabinet 2 assigned as Cabinet 3		
Current label on cable	**Connect to connector**	**New label on cable**
J21	J1	J31
J22	J2	J32
J23	J3	J33
J24	J4	J34
J25	J5	J35
J26	J6	J36
J27	J7	J37
J28	J8	J38
J29	J9	J39
J30	J10	J40

32 Put on the antistatic wrist strap located in the expansion cabinet.

33 Locate the fiber receiver card.

- Is the expansion cabinet within 10 m (33 ft) of the main cabinet and connected with NTBK78 (A0618443 or A0632902) plastic fiber-optic cable? If so, use an NTDK23 Fiber Receiver card.
- Do you want to move up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (Multimode) or NTDK89 (Single Mode) Fiber Receiver card.

34 In each expansion cabinet, connect the fiber-optic cable to the fiber receiver card, as shown in Figure 43 on page 105.

WARNING

Use of the fiber-optic interface product in Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The optical port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If you are using the NTBK78 (A0618443 or A0632902) cable:**

xii Remove the two protective plugs from the fiber receiver card.

xiii Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 44 on page 106. The marking (if there is one) on the connector is not visible when you make the connection correctly.

- **If you are using glass fiber-optic cable:**

xiv Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.

xv Insert the plug in its assigned connector on the fiber receiver card.

xvi Lock the connector in position by turning it a half turn clockwise. See Figure 45 on page 107.

xvii Repeat steps a to c for the second fiber-optic connection

When connected, wind the excess fiber-optic cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

35 In each expansion cabinet, install the fiber receiver card in the slot labeled "Fbr Rcvr."

Wind the slack fiber-optic cable around the fiber routing guide one time.

36 Remove the NTAK04, NTAK05, NTDK72, or NTDK78 power supply from the old expansion cabinets and install it in the new expansion cabinets.

Connect the power cord to the bottom of the power supply unit.

37 Remove any circuit cards you want to keep from the old expansion cabinets and install them in the corresponding slots in the new cabinets.

38 Connect the power to the expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

Figure 43
Receiver card and fiber connection

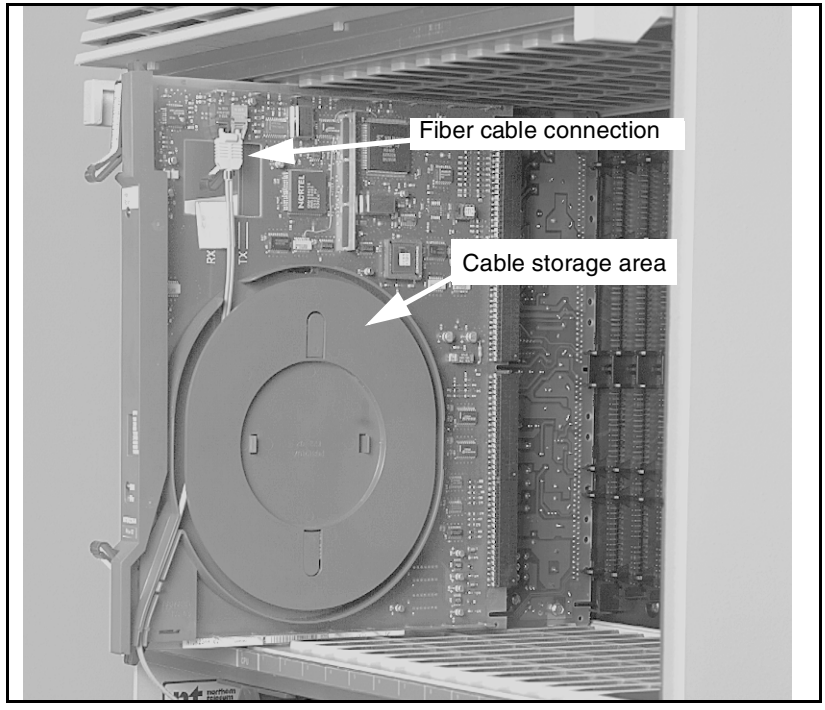


Figure 44
Plastic fiber-optic cable connection

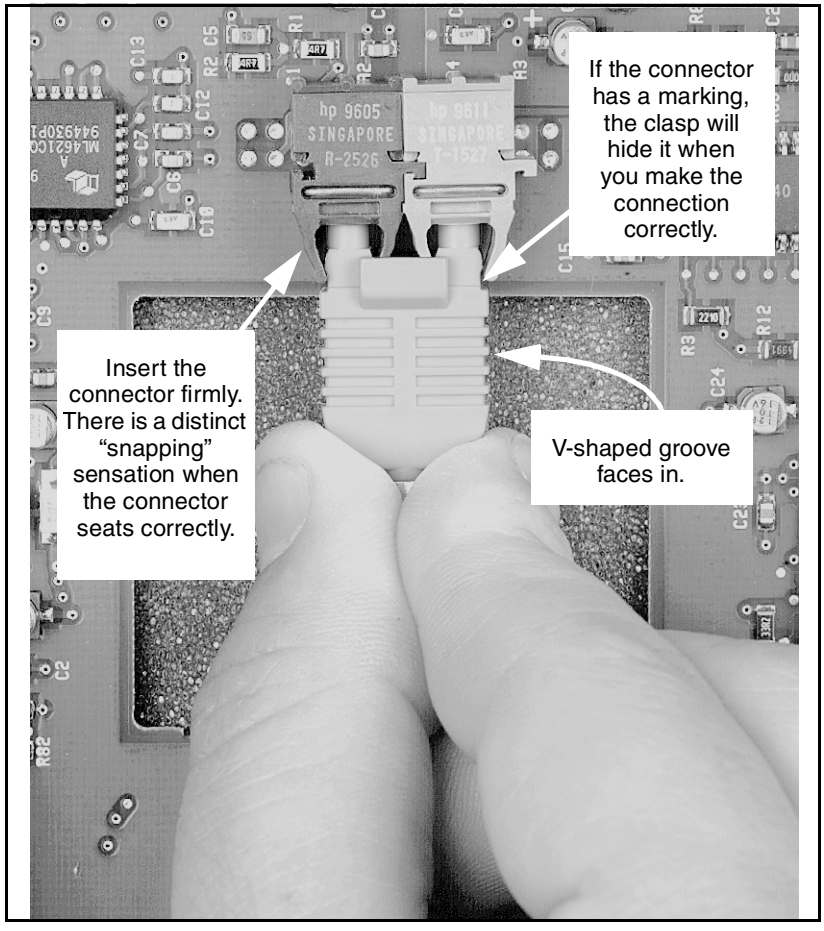
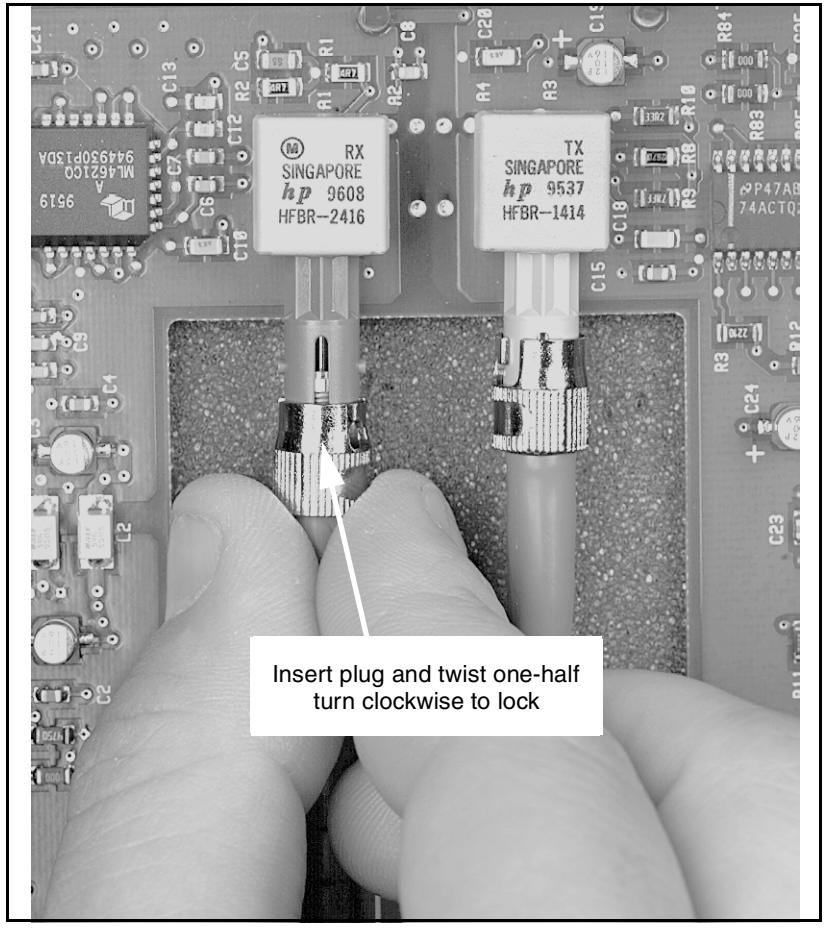

If the connector has a marking, the clasp will hide it when you make the connection correctly.
Insert the connector firmly. There is a distinct "snapping" sensation when the connector seats correctly.
V-shaped groove faces in.

Figure 45
Glass fiber-optic cable connection



39 Check the fiber-related LEDs on the SSC card.

The LED for the equipped expansion daughterboard is green.

- If the LED is red (disabled indication):
  a Load overlay program 135.
  b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).
- If the LED is yellow (fault indication):
  a Check all fiber-optic cable. Make sure you connected it correctly and it is not damaged.
  b If the LED remains yellow, refer to *Option 11C and 11C Mini Fault Clearing* (553-3011-500).

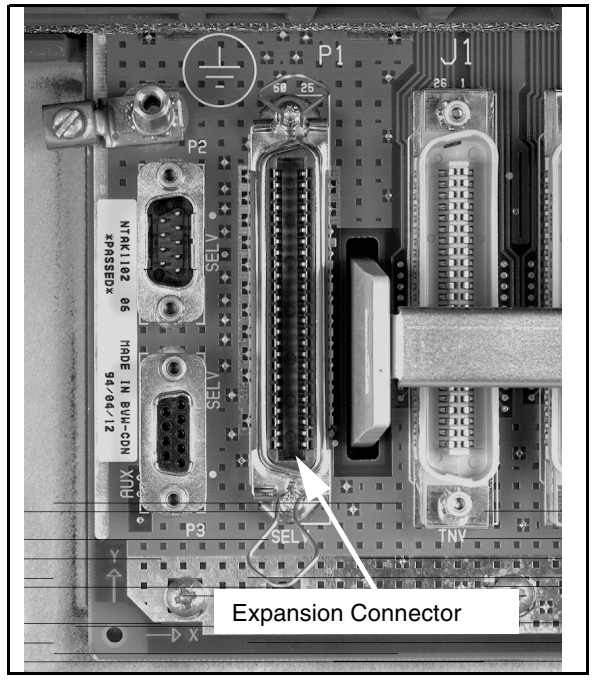
40 Change the tone and SDI functions.

The NTDK20 SSC card joins together many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 163 for more information.

41 Install the single port TTY cable in the expansion cabinet (See Figure 46 on page 109).

42 Connect the NTDK27 Ethernet cable to the expansion connector in the cabinet. See Figure 46 on page 109.)

Figure 46
Cable connection



End of Procedure

Restore data because of an upgrade failure

This section explains how to revert back to an Option 11E if the upgrade fails. To revert back, insert the following back into slot 0 of the main cabinet and reload the system:

- Option 11E NTBK45 System Core card and the software cartridge

Procedure 8
Revert back to Option 11E

1 **Disconnect the power from system and connect the NTBK78 cable.**

2 **Remove the NTDK20 SSC card from slot 0 in the main cabinet.**

3 **Attach the software cartridge to the NTBK45 System Core card.**

4 **Insert the NTBK45 System Core card in slot 0 and power up the system.**

End of Procedure

Upgrade cabinet hardware

Contents

This section contains information on the following topics:

Summary of items required 112
NTDK18AA Cabinet Upgrade Kit 112
Tools needed 112
Upgrade the cabinet 113

This chapter describes how to upgrade cabinets to hold dual port expansion daughterboards and 100 BaseT interconnections.

You must upgrade the cabinet when one or more of the following conditions apply:

- You are adding more expansion cabinets to a three cabinet system.
- You need additional space in the cabinet to hold circuit cards with faceplate cables.
- You want to provide the “new look” to an older cabinet.

Summary of items required

To perform this upgrade you need an NTDK18AA Cabinet Upgrade Kit and the listed tools.

NTDK18AA Cabinet Upgrade Kit

The NTDK18AA Cabinet Upgrade Kit contains all of the items needed to complete the cabinet upgrade. The kit contains one of each of the following items:

- cabinet door
- grill
- stiffener rail
- label for cabinet number identification
- multiple cable routing guide
- bag of screws
- upgrade instructions

Tools needed

You need the following tools to complete the cabinet upgrade:

- large slot screwdriver
- #2 Posidrive or Phillips screwdriver
- 1/4-inch nut driver

Upgrade the cabinet

The following procedure describes how to upgrade the cabinet.

Procedure 9
Upgrade cabinet hardware

1 Do one of the following:

- If the cabinet you are upgrading is in operation, log in to the system and perform a data dump.

Note: You must do this step to make sure that you back up any changes made after the last data dump.

a Load LD 43.

b Enter command **EDD**.

c After the data dump finishes, exit LD 43 by entering ********.

- If the cabinet you are upgrading is not in operation go to Step 2.

2 Remove the door from the cabinet.

3 Remove the drip tray.

4 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

5 Wait at least five minutes.

WARNING

Wait at least five minutes before continuing with Step 6. Read the important **Caution** on the faceplate of the power supply unit.

6 Disconnect the AC power supply cord and, if equipped, disconnect the DC power supply cord from the power supply unit.

Note: The cords are at the bottom of the power supply unit, as shown in Figure 48 on page 115.

7 Attach the antistatic wrist strap, provided at the bottom of the cabinet, to your wrist.

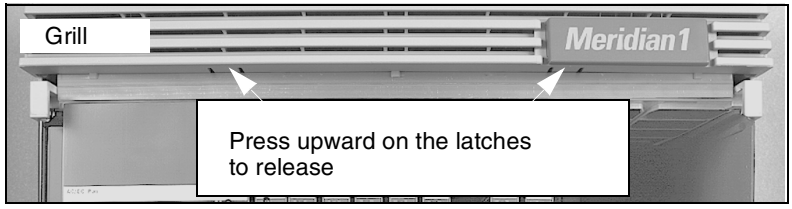
CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components.

8 Remove the power supply unit from the cabinet.

9 With a large slot screwdriver, carefully pry the latches on the grill at the top of the cabinet (Figure 47) until the latches release. Lift the grill up to remove it and replace with the new grill.

Figure 47
Location of latches on top grill

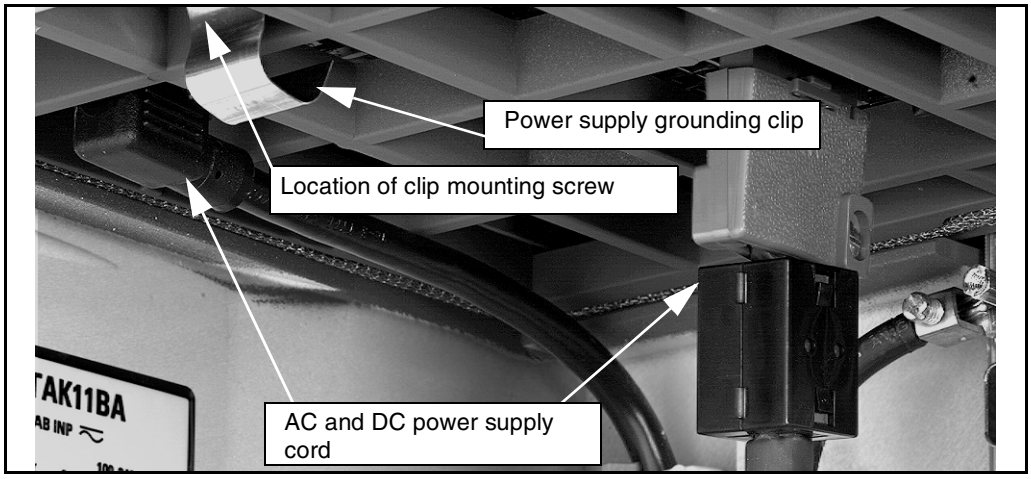


10 Remove the grounding clip from the stiffener rail.

a Note the location and placing of the power supply grounding clip located below the power supply unit (see Figure 48).

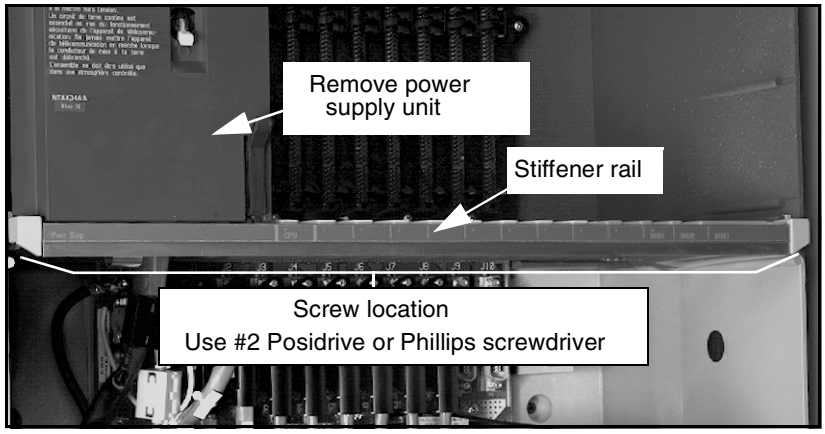
b With a 1/4-inch nut driver (or possibly a #2 Posidrive or Phillips screwdriver), remove the grounding clip from the stiffener rail (see Figure 48).

Figure 48
Location of power supply cords and grounding clip



11 With the #2 Posidrive screwdriver (or #2 Phillips screwdriver), remove the remaining screws holding the stiffener rail to the shelf. Remove the rail (see Figure 49).

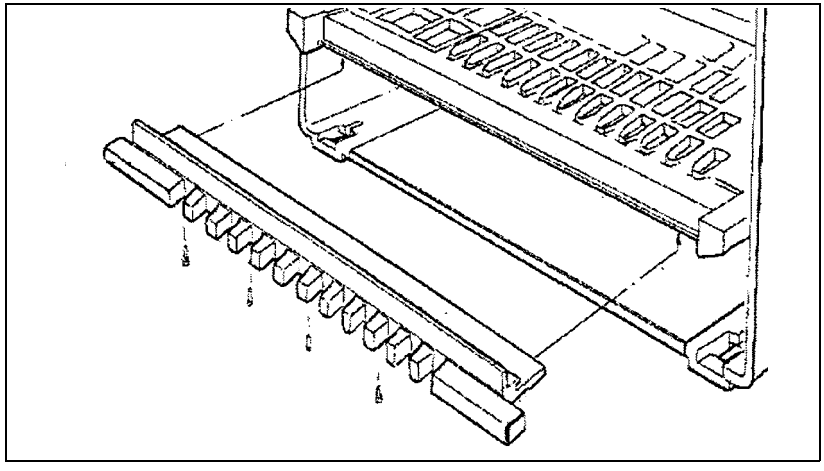
Figure 49
Location of Stiffener Rail



12 Install the new stiffener rail with the removed screws or with the screws supplied in the upgrade kit (see Figure 50).

Install the center screw first (the hole for the center screw is round, while the remaining screw holes are slots).

Figure 50
New Stiffener Rail



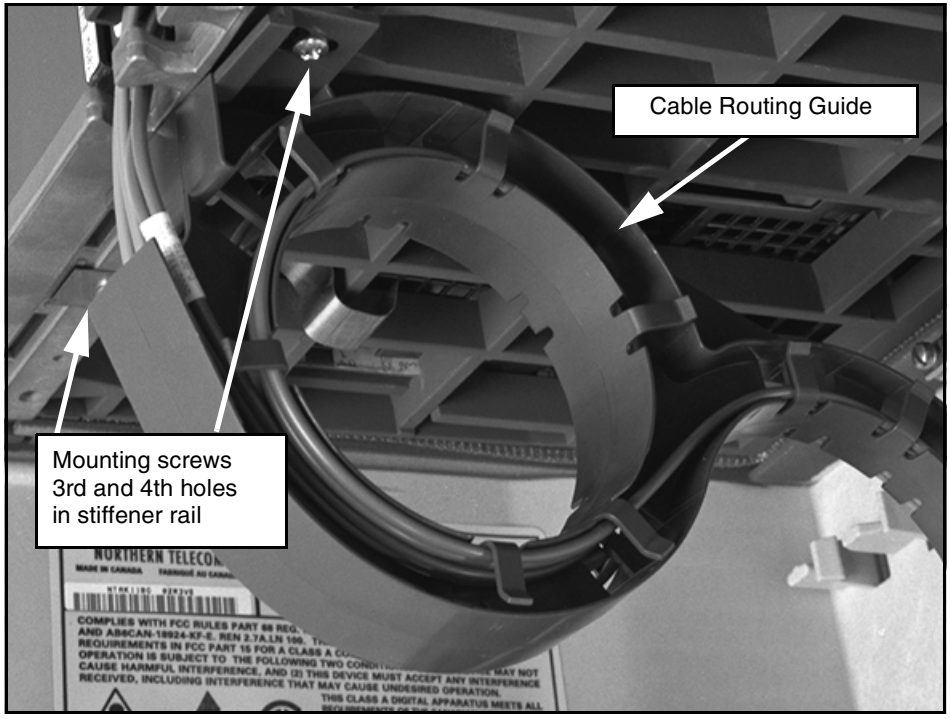
13 Install the power supply grounding clip again (see Figure 48 on page 115).

Note: Make sure you position the grounding clip so that it comes in contact with the bottom of the power supply unit.

14 Install a multiple cable routing guide in the location below Slot 0 (the SSC slot or, possibly, the Fbr Rcvr slot).

You install the routing guide with the third and fourth rail stiffener mounting screws (see Figure 51).

Figure 51
Cable Routing Guide (shown with cables)



15 Install the remaining screws to fasten the stiffener rail.

The upgrade kit provides additional screws.

16 Attach an identification label to the space provided at the right end of the stiffener rail. The label shows the appropriate cabinet number (Main, 1, 2, 3, or 4).

17 Install the power supply unit again.

18 Connect the power supply cords (Figure 48 on page 115).

19 Connect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

The system will SYSLOAD and return to normal.

20 Install the new door on the cabinet.

End of Procedure

Upgrade the NTDK20AB SSC or later to the NTDK20CA SSC

Contents

This section contains information on the following topics:

How to identify an upgraded NTDK20 SSC 119
Boot Code 120
How to handle circuit cards 120
Summary of items required 120
NTDK19AA SSC Upgrade Kit 120
Tools needed 121
Upgrade the SSC 121

Procedure 10 on page 121 describes how to upgrade an NTDK20AB SSC card to an NTDK20CA, using the NTDK19AA SSC Upgrade Kit. The NTDK20CA SSC card is required to hold dual port expansion daughterboards.

> ***Note:*** The NTDK20CA and later SSC card supports both single port and dual port expansion daughterboards.

How to identify an upgraded NTDK20 SSC

To identify if an SSC card is an upgraded card, look for the letters “CA” in the product code. These letters indicate that the SSC card is an upgraded card.

Example: An NTDK20AB SSC becomes an NTDK20CA after the upgrade process.

Boot Code

The updated boot code on the NTDK20CA SSC card can support single port and dual port expansion daughterboards and the NTDK21, NTDK81, and NTTK13AA or NTTK25AA Software Flash Daughterboards.

Part of the procedure on page 121 is updating the boot code. Also, refer to "Firmware upgrade procedure for IP daughterboard" on page 265.

> ***Note:*** It is important that the boot code on the NTDK20CA SSC be at least NTDK34FA Release 01 or later. Check and update the boot code at the start of the procedure on page 121.

How to handle circuit cards

To prevent damaging circuit cards, always handle them as follows:

- Wear an antistatic wrist strap before handling circuit cards. The bottom of each Option 11C cabinet has an antistatic wrist strap.
- Put the card on an antistatic pad to perform the upgrade.
- Handle cards by the card stiffeners and edges only. Do not touch the contact points or components.
- Remove cards from the packaging or handle cards away from electric motors, transformers, or like equipment.
- Store cards in protective packing. Do not stack cards on top of each other, unless they are in packaging.
- Store cards in a dry area that is free of dust.

Summary of items required

You need an NTDK19AA SSC Upgrade Kit and the listed tools.

NTDK19AA SSC Upgrade Kit

The NTDK19AA SSC Upgrade Kit contains the items needed to complete the SSC upgrade. The kit contains the following items:

- one faceplate assembly
- one LED cable assembly
- three plastic rivets
- one 16 M SIMM

- one Label Kit, Upgrade Release Number
- one set of upgrade instructions

Tools needed

The only tool needed to complete the SSC upgrade is a pair of needle-nose or long-nosed pliers.

Upgrade the SSC

The following procedure describes how to upgrade the SSC to NTDK20CA.

Procedure 10
Upgrade an NTDK20AB SSC to an NTDK20CA

1 Do one of the following:

- If the NTDK20 SSC you are upgrading is in an operating Option 11C, start at Step 2.
- If the NTDK20 SSC you are upgrading is not in an operating Option 11C, do the following:

a Make sure you update its boot code before continuing.

Normally, you need an operating system to check and update the boot code on an SSC card. For information about updating the boot code, refer to “Firmware upgrade procedure for IP daughterboard” on page 265.

b Attach an antistatic wrist strap to your wrist and go to Step 7.

CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. Be careful not to damage any components on the SSC while handling the card.

2 Log in to the system and perform a data dump.

Note: You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure.

a Load Overlay 43.

b Enter command **EDD**.

c Let the data dump finish, then exit LD 43 by entering "****".

3 Check the boot code version on the NTDK20AB SSC.

The boot code must be at least an NTDK34FA Release 01 or later. If it is not, update it. Refer to"Firmware upgrade procedure for IP daughterboard" on page 265 for information about checking and updating the boot code.

4 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

5 Attach an antistatic wrist strap to your wrist.

An antistatic wrist strap is in the bottom of Option 11 cabinets.

CAUTION

Wear an antistatic wrist strap when handling circuit cards or any of its components. Be careful to not damage any components on the SSC while performing the following steps.

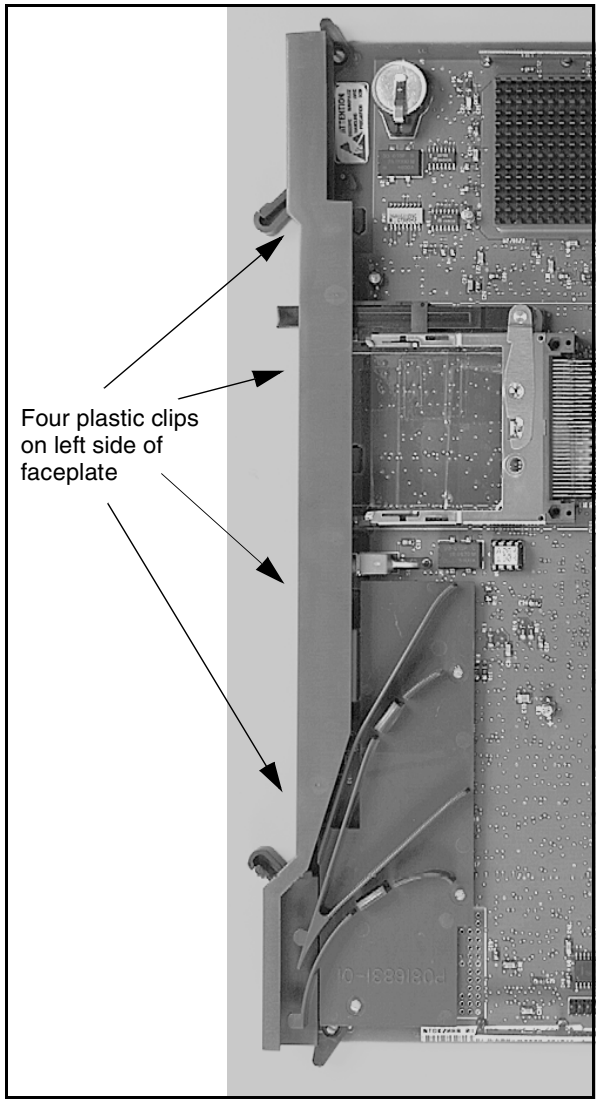
6 Remove the NTDK20 SSC card from the cabinet.

7 Remove any existing Fiber Expansion Daughterboards from the SSC card.

8 Remove the existing faceplate from the NTDK20 SSC.

To remove the faceplate, release the four plastic clips fastening the faceplate to the circuit card (see Figure 52). Carefully pull the faceplate forward.

Figure 52
Location of plastic retaining clips

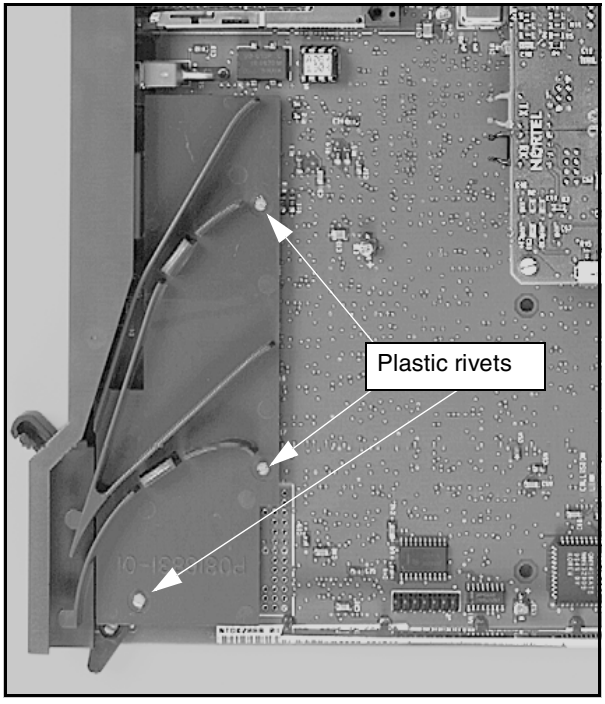


9 Remove the three rivets and remove the routing guide (see Figure 53).

a Note the location of the three plastic rivets that hold the on-board fiber routing guide to the circuit card. One end of each rivet has a slot.

b Use needle- or long-nosed pliers to squeeze the end that has a slot. Carefully push the rivet through the hole in the circuit card until it releases.

Figure 53
Location of plastic rivets



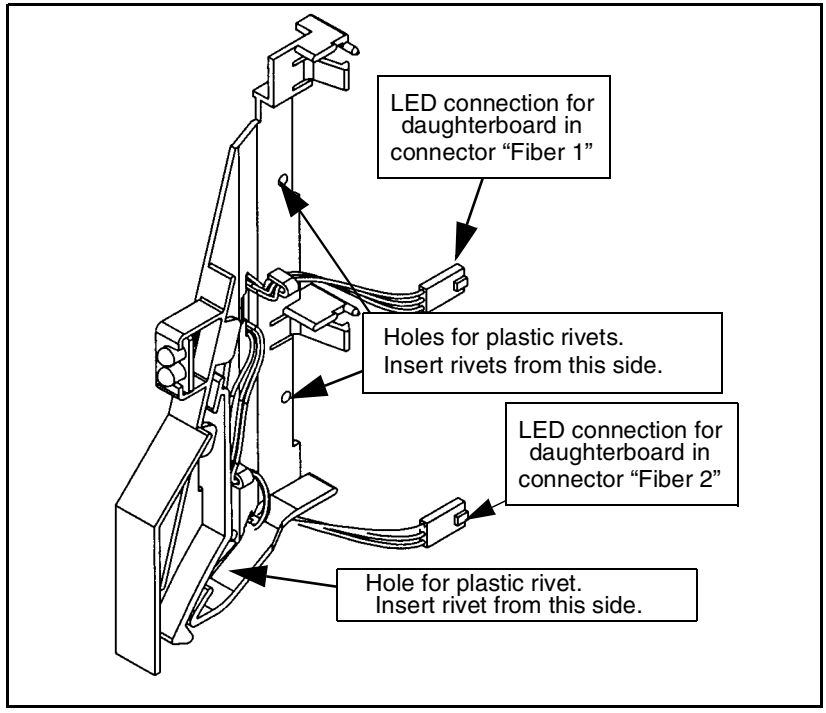
10 Attach the NTDK8302 LED Cable Assembly (Figure 54) in the location left empty by the fiber router.

Use the three plastic rivets supplied with the LED cable assembly.

a Install the rivets in the holes in the circuit card you made note of in Step 9. See Figure 54 for the correct location.

b Fasten the new router to the circuit card.

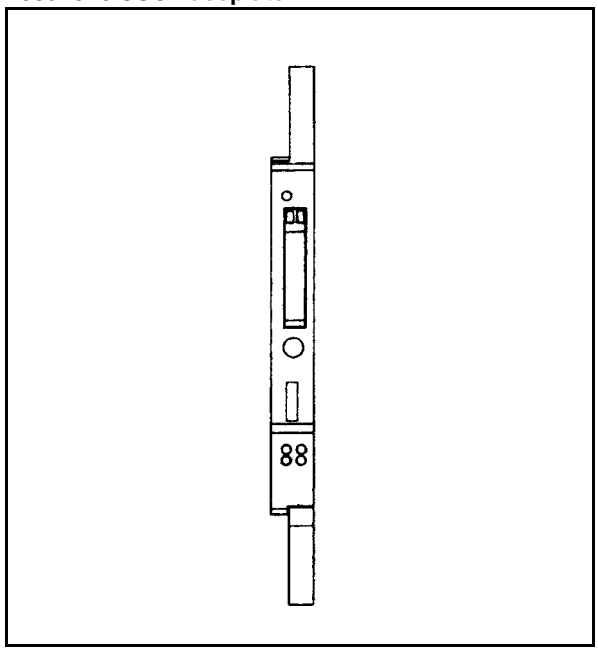
Figure 54
NTDK8302 LED Cable Assembly


LED connection for daughterboard in connector “Fiber 1”
Holes for plastic rivets. Insert rivets from this side.
LED connection for daughterboard in connector “Fiber 2”
Hole for plastic rivet. Insert rivet from this side.

11 Install the new faceplate (Figure 55) on the front of the SSC card.

The faceplate snaps into place when it seats correctly. It fastens to the circuit card with four plastic clips like those on the old faceplate.

Figure 55
P0891070 SSC Faceplate



12 Remove the existing SIMM (see Figure 56 for location of SIMM). Replace it with the 16 M SIMM provided with the upgrade kit.

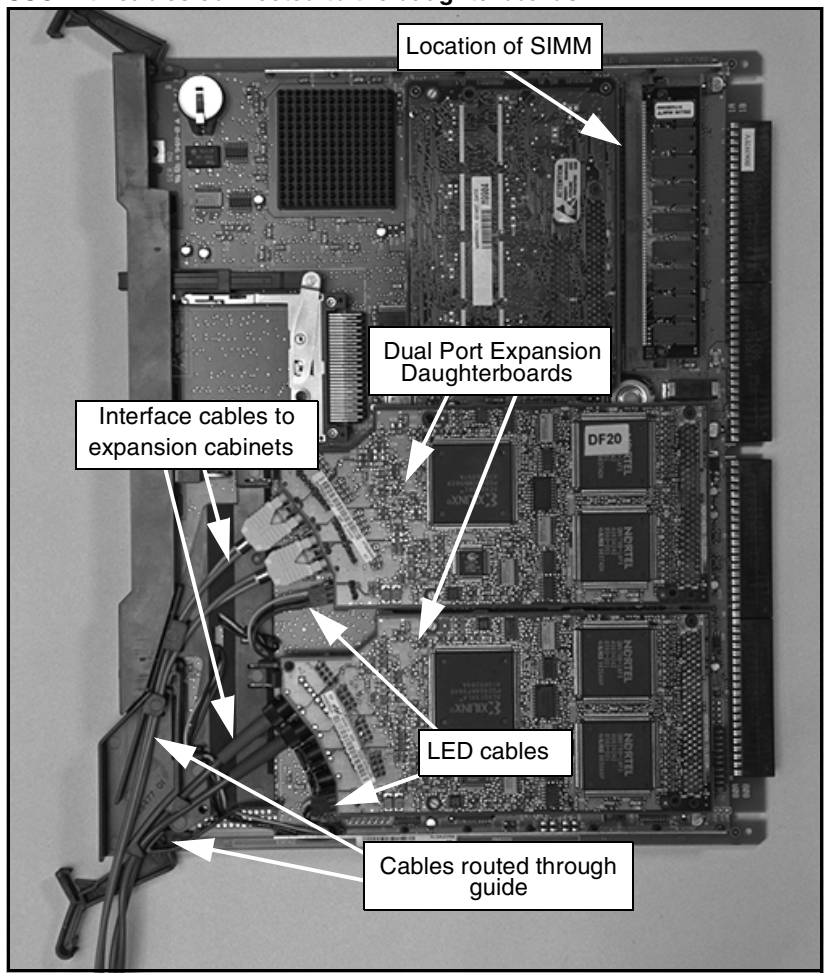
13 Install the expansion daughterboards in their assigned fiber connector on the SSC card. Then connect LED cables (see Figure 54) and interface cables (see Figure 56).

Note: You do not use the LED cables with single port daughterboards.

14 Attach the appropriate upgrade release label from the Label Kit provided with the Upgrade Kit to the faceplate of the SSC in the space provided.

Attach the same release number label as the original SSC. For example, if the original SSC was NTDK20AB Release 9, the upgraded SSC becomes NTDK20CA Release 9.

Figure 56
SSC with cables connected to the daughterboards



15 Insert the SSC card in its assigned slot in the cabinet and restore power to the system.

End of Procedure

Upgrade your Option 11C/11C Mini to support IP connectivity

Contents

This section contains information on the following topics:

Reference list 129
Upgrading your Option 11C system 131
Summary of items required 131
Summary of steps 133
Upgrade procedures 134
Upgrading your Option 11C Mini system 146
Summary of items required 146
Summary of steps 148
Connect the Main and IP Expansion cabinets/chassis 161

Reference list

The following are the references in this section:

- *Option 11C and 11C Mini Fault Clearing* (553-3011-500)
- *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330)
- *X11 Maintenance* (553-3001-511)
- *Option 11C and 11C Mini Technical Reference Guide* (553-3011-100)

This chapter describes how to upgrade your Option 11C or Option 11C Mini system to support IP Expansion using 100BaseF or 100BaseT connectivity.

Note 1: The upgrade to IP connectivity requires the Option 11C CPU (Small System Controller card). Therefore, only upgrade scenarios starting with the Option 11C as the installed base system are described in this chapter. For older systems (for example, Options 11, 11E or 11C with NTDK26 Backwards Compatible Daughterboard), you must first upgrade your system to Option 11C with fiber before you can upgrade your cabinets to support IP connectivity. Refer to the Option 11C and 11C Mini Planning and Installation Guide to install expansion cabinets.

Note 2: The cabinets (both Main and IP Expansion) must support the faceplate cabling that is used on all IP Expansion daughterboards. If your cabinets do not support cable routing through the faceplate, you must upgrade them using the NTDK18AA kit. Refer to "Upgrade cabinet hardware" on page 111. Figure 57 below illustrates the NTDK18AA Cabinet kit.

Figure 57
NTDK18AA Cabinet kit

This chapter contains the following procedures:

- Procedure 11: "Upgrade an Option 11C Main cabinet to support IP connectivity" on page 134

- Procedure 12: “Upgrade an Option 11C Expansion cabinet to support IP connectivity” on page 142
- Procedure 13: “Upgrade an Option 11C Mini Main chassis to support IP connectivity” on page 149
- Procedure 14: “Upgrade an Option 11C Mini Expansion chassis to support IP connectivity” on page 157
- Procedure 15: “Connect the Main and IP Expansion cabinets/chassis” on page 161

For information on how to upgrade software on the Main and IP Expansion cabinets/chassis, refer to “Upgrade Option 11C/11C Mini software to a new release” on page 197.

Upgrading your Option 11C system

Summary of items required

You need the following items to upgrade your Option 11C system to support IP connectivity:

- NTDK20EA or later SSC card is required for the Opton 11C Main cabinet
- NTDK20CA or later SSC card is required for Option 11C IP Expansion cabinet(s).

  Note: The NTDK20AB or later SSC card can be upgraded to an NTDK20CA for use in the IP Expansion cabinet(s). See “Upgrade the NTDK20AB SSC or later to the NTDK20CA SSC” on page 119.

- The following daughterboards, depending on the type of connectivity:
  - NTTK01 single-port 100BaseF IP daughterboard
  - NTTK02 dual-port 100baseF IP daughterboard
  - NTDK99 single-port 100BaseT IP daughterboard
  - NTDK83 dual-port 100BaseT IP daughterboard

  Note: Other than the physical interface and number of ports, all variations of the IP daughterboards have the same functionality.

- The following cables for connecting the Main and IP Expansion cabinets in a point-to-point configuration:
  - A0817052 5-meter fiber cable with MT-RJ to ST connectors for connecting the Main and IP Expansion cabinets using the 100BaseF IP daughterboards and an A0346816 ST fiber coupler. The A0346816 fiber couplers allow two MT-RJ to ST cables to be connected to each other in a point-to-point configuration.
  - NTTK34AA 2-meter UTP CAT 5 RJ45 cross-over cable and NTDK8305 2-meter STP CAT 5 extension cable for connecting the Main and IP Expansion cabinets using the 100BaseT IP daughterboards
- The following cables for connecting the Main and IP Expansion cabinets over a data campus network:
  - A0817052 5-meter fiber cable with MT-RJ to ST connectors for connecting the Main and IP Expansion cabinets using the 100BaseF IP daughterboards. The two A0817052 fiber cables are usually connected to the customer's LAN.
  - NTDK8305 2-meter STP CAT 5 extension cable for connecting the Main and IP Expansion cabinets using 100BaseT IP daughterboards. A customer-supplied straight-through cable is used in place of the NTTK34AA 2-meter cross-over cable.
- NTTK13AA, NTTK25AA or later Software Daughterboard for each cabinet
- Software Delivery card with Release 25.30 or later software

  Note: If you are upgrading from Release 24 to Release 25.30 or later software, you must upgrade the bootcode to NTDK34FA Release 7 or later.
- Stand offs sent with the IP daughterboards
- NTDK57DA IP Expansion cabinet security device to install on the SSC card in each IP Expansion cabinet. This security device is identified by NT_REM with serial I.D. 4xxxxxxx.
- EMC grounding clip for each 100 BaseT cabinet
- NTBK48 3-port SDI cable for each IP Expansion cabinet

Summary of steps

The following list summarizes the steps for upgrading an Option 11C system to support IP connectivity.

1 If you are upgrading from Release 24 to Release 25.30 or later software, upgrade the bootcode to NTDK34FA Release 7 or later.

- **a** Make sure the power to the system is turned on.
- **b** Upgrade the bootcode.

2 Disconnect the power from the Main and IP Expansion cabinets.

3 Upgrade the hardware in the Main cabinet.

- **a** Install 100BaseF or 100BaseT IP daughterboards on the SSC card.
- **b** If you have not already done so, replace the software daughterboard on the SSC card with an NTTK13AA or NTTK25AA or later.

4 Upgrade the hardware in the IP Expansion cabinet.

- **a** Replace the Fiber Receiver card with an SSC card.
- **b** Install a 100BaseF or 100BaseT single-port IP daughterboard in Connector #2 on the SSC card.
- **c** Install the IP Expansion cabinet security device.
- **d** If you have not already done so, replace the software daughterboard on the SSC card with an NTTK13AA or NTTK25AA or later.

5 Install the EMC grounding clip on the stiffener rail of the Main cabinet.

6 Connect the Main and IP Expansion cabinets.

7 Power up the Main and IP Expansion cabinets.

8 Check the Link LED on the daughterboards to make sure that the connections are established.

9 Upgrade system software. Refer to “Upgrade Option 11C/11C Mini software to a new release” on page 197.

Upgrade procedures

Procedure 11
Upgrade an Option 11C Main cabinet to support IP connectivity

1 Do one of the following:

- If you are upgrading from Release 24 to Release 25.30 or later software, go to Step 2.
- If you are **not** upgrading from Release 24 to Release 25.30 or later software, choose one of the following options:

  —If the Option 11C is operating, go to Step 3.

  —If the Option 11C is not operating, go to Step 5.

2 If you are upgrading from Release 24 to Release 25.30 or later software, update the bootcode to NTDK34FA Release 7.

a Make sure that the power is turned on.

Set the circuit breaker switch on the front of the power supply to ON.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to ON.

b Login to the system.

c Enter the EDD command.

d After the data dump finishes, exit LD 43 by entering "********".

e Upgrade the bootcode. Refer to "Firmware upgrade procedure for IP daughterboard" on page 265.

f Go to Step 4.

3 Log into the system and perform a data dump.

Note: You must perform this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure.

a Load LD 43.

b Enter the **EDD** command.

c After the data dump finishes, exit LD 43 by entering "********".

4 **Disconnect the power from the cabinet.**

Set the circuit breaker switch on the front of the power supply to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

5 **Attach an antistatic wrist strap to your wrist.**

The bottom of each Option 11C cabinet contains an antistatic wrist strap.

CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the SSC card, be careful not to damage any of its components.

6 **Remove the NTDK20 SSC card from the cabinet. Place the SSC card on a clean, flat surface.**

Note: Make sure that your existing SSC card is placed in the Main cabinet. Any new SSC cards that you have are for the IP Expansion cabinets.

7 **Remove any existing fiber expansion daughterboards from the SSC card. These daughterboards will be replaced with IP daughterboards.**

8 **Remove the existing plastic standoffs from the SSC card.**

9 Install the plastic standoffs that came with the IP expansion daughterboards.

10 **Do one of the following:**

- If you are installing 100BaseF daughterboards, go to Step 11.
- If you are installing 100BaseT daughterboards, go to Step 12.

11 **Install the NTTK01 single-port 100BaseF IP daughterboard or the NTTK02 dual-port 100BaseF IP daughterboard in the appropriate connectors on the SSC card.**

Note: The SSC card supports up to two daughterboards. The IP daughterboards can co-exist with any of the existing Option 11C fiber daughterboards installed on the SSC card.

a Remove the protective plug from the MT-RJ port on the daughterboard.

b Remove the protective cap from the A0817052 fiber cable MT-RJ end on the fiber cable.

c Insert the fiber cable end firmly into the MT-RJ port on the daughterboard. Carefully pull on the cable to make sure that the cable is inserted completely.

Note: The top connector on the SSC card is for Expansion cabinets 1 and 3. The bottom connector on the SSC card is for Expansion cabinets 2 and 4. See Figure 58 on page 137.

When the daughterboard is installed on the SSC card, the upper MT-RJ port is port 1, which is for Expansion cabinet 1.

d Insert the LED cable on the SSC card into the LED connector on the IP daughterboard (if the IP daughterboard is a dual-port IP daughterboard). If the IP daughterboard is a single-port daughterboard, do not use the LED cable. See Figure 58.

The LED cable connection provides the second LED on the faceplate.

e Locate the plastic alignment pin on the SSC card.

f Insert the plastic alignment pin into the appropriate hole on the daughterboard.

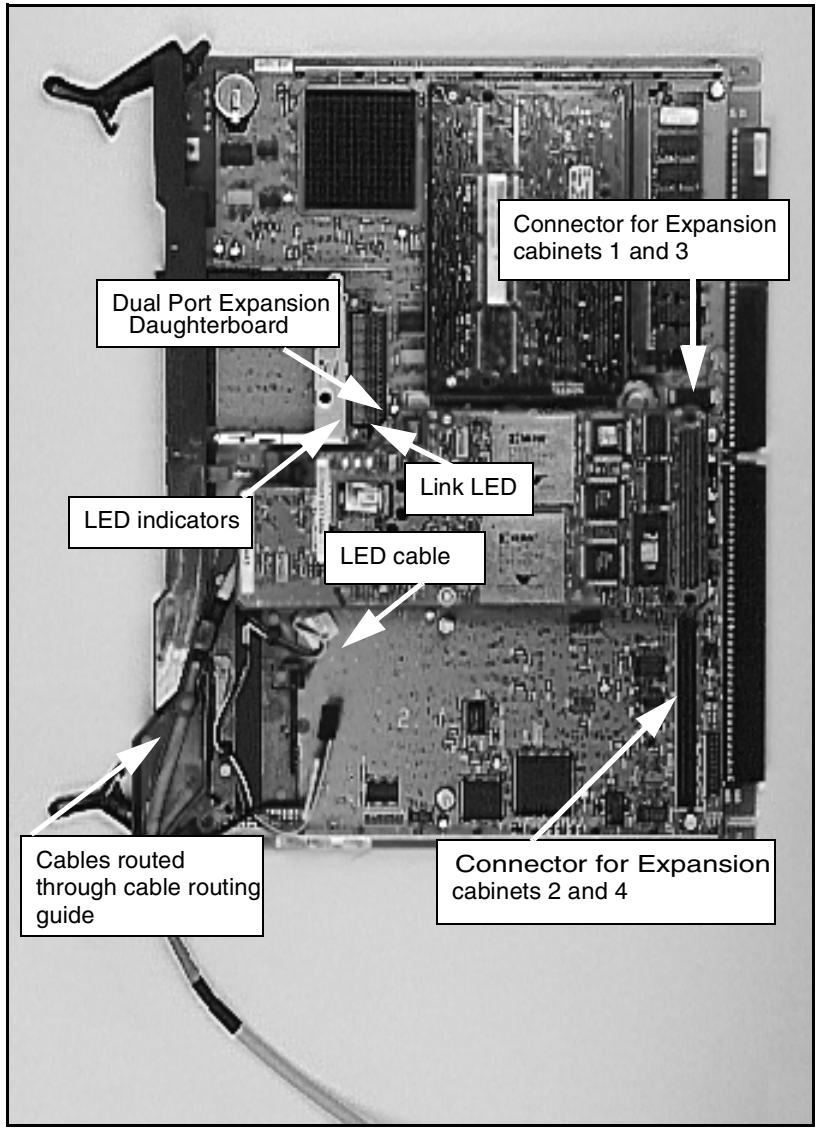
g Press the end of the daughterboard onto the daughterboard connector.

h Press the daughterboard onto the plastic standoffs to fasten the daughterboard securely to the SSC card.

i Route the fiber cable through the cable routing guide on the SSC card. See Figure 58 on page 137.

j Go to step Step 13.

Figure 58
SSC card for the Main cabinet


Connector for Expansion cabinets 1 and 3
Dual Port Expansion Daughterboard
Link LED
LED indicators
LED cable
Cables routed through cable routing guide
Connector for Expansion cabinets 2 and 4

12 Install the NTDK99 single-port 100BaseT daughterboard or the NTDK83 dual-port 100BaseT IP daughterboard in the appropriate connectors on the SSC card.

Note: The SSC card supports up to two daughterboards. The IP daughterboards can coexist with any of the existing Option 11C fiber daughterboards.

a Insert the NTDK8305 extension cable end firmly into the RJ45 port on the daughterboard. Make sure that the cable is inserted completely.

Note: The top connector on the SSC card is for Expansion cabinets 1 and 3. The bottom connector on the SSC card is for Expansion cabinets 2 and 4. See Figure 58 on page 137.

When the daughterboard is installed on the SSC card, the upper RJ-45 port is port 1, which is for Expansion cabinet 1.

b Insert the LED cable on the SSC card into the LED connector on the IP daughterboard (if the IP daughterboard is a dual-port IP daughterboard). If the IP daughterboard is a single-port daughterboard, do not use the LED cable. Refer to Figure 58 on page 137.

The LED cable connection provides the second LED on the faceplate.

c Locate the plastic alignment pin on the SSC card.

d Insert the plastic alignment pin into the appropriate hole on the daughterboard.

e Press the end of the daughterboard onto the daughterboard connector.

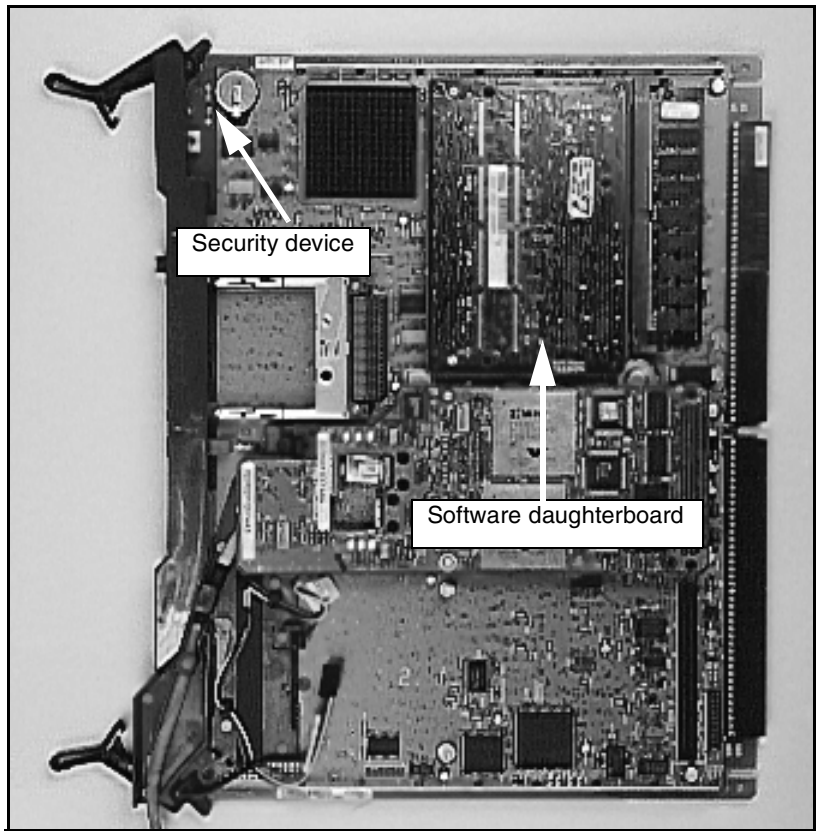
f Press the daughterboard onto the plastic standoffs to fasten the daughterboard securely to the SSC card.

g Route the extension cable through the cable router guide on the SSC card. See Figure 58 on page 137.

h Go to Step 13.

13 If you have not already done so, install the NTTK13AA or NTTK25AA software daughterboard in the appropriate connector on the SSC card. See Figure 59.

Figure 59
Software daughterboard on the SSC card



14 Install the EMC grounding clip on the stiffener rail of the Option 11C Main cabinet.

The gounding clip is mounted on the front of the stiffener rail of the Option 11C cabinet. There is a small #4-40 screw to fasten the clip to the stiffener rail. The 100BaseT cable is then fed through and secured in the clip. Depending on what version of cabinet you have, the EMC grounding clip may already be installed on the stiffener rail. Refer to Figure 60 on page 140 for the correct grounding clip location.

If the EMC grounding clip is already installed, loosen the screws that secure it to the stiffener rail and rotate the clip to the outward position, in order to route cables.

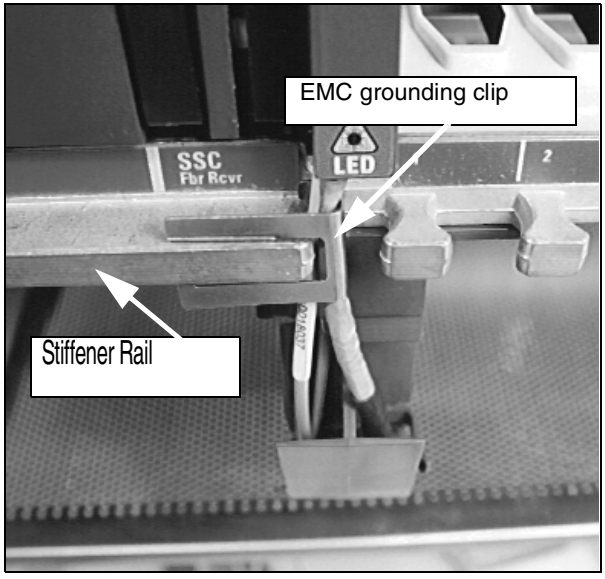
CAUTION

You must install the EMC grounding clip to ensure electrical contact between the shield and the stiffener rail on the cabinet.

15 Install the SSC card in slot 0 of the cabinet.

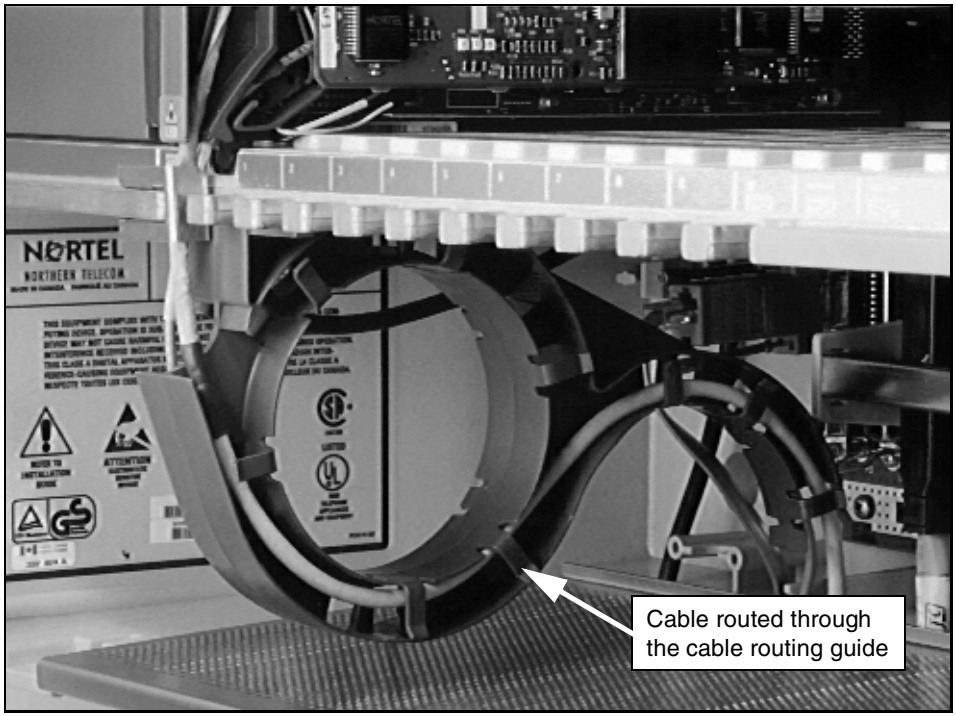
16 Route the cables coming from the SSC card through the EMC grounding clip. See Figure 60.

Figure 60
EMC grounding clip



17 Loop the excess cable around the cable routing guide a minimum of one complete loop. See Figure 61 on page 141**.**

Figure 61
Cable routing guide



18 Upgrade the IP Expansion cabinets. Do one of the following:

- If the IP Expansion cabinet is an Option 11C cabinet, refer to Procedure 12 on page 142.
- If the IP Expansion cabinet is an Option 11C Mini chassis, refer to Procedure 14 on page 157.

19 Restore power to the Main cabinet.

Set the circuit breaker switch on the front of the power supply in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to ON.

20 Refer to *X11 Maintenance* (553-3001-511) LD 117 to configure IP Expansion cabinets IP Address.

———————— *End of Procedure* ————————

Procedure 12
Upgrade an Option 11C Expansion cabinet to support IP connectivity

Note: The NTDK20CA or later SSC card is required in each Option 11C Expansion cabinet supporting IP connectivity.

1 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

2 Attach an antistatic wrist strap to your wrist.

The bottom of each Option 11C cabinet contains an antistatic wrist strap.

CAUTION
Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the SSC card, be careful not to damage any of its components.

3 Remove the fiber receiver card from slot 0 of the Expansion cabinet.

4 Place an NTDK20 SSC card on a clean, flat surface.

Note: Make sure that your existing SSC card and security device is placed in the Main cabinet. Any new SSC cards that you have are for the IP Expansion cabinets.

5 Remove the existing plastic standoffs used for expansion daughterboards from the SSC card.

6 Install the plastic standoffs that came with the IP expansion daughterboards.

7 Do one of the following:

- Install a 100BaseF single-port daughterboard in connector #2 on the SSC card. Refer to Step 11 on page 135 for instructions on how to install this daughterboard on the SSC card.

After you have installed the 100BaseF daughterboard, continue with Step 8 on page 143.

- Install a 100BaseT single-port daughterboard in connector #2 on the SSC card. Refer to Step 12 on page 138 or instructions on how to install this daughterboard on the SSC card.

After you have installed the 100BaseT daughterboard, continue with Step 8 on page 143.

Note 1: For IP Expansion cabinets, you must install the IP Expansion daughterboard in Connector #2 (the lower connector) to ensure clock synchronization.

Note 2: Record the MAC address on the daughterboard and the number of the associated Expansion cabinet before you install the daughterboard. You will need this MAC address when you perform the software upgrade. See Figure 62 on page 144.

8 Install the NTDK57DA IP Expansion cabinet security device in its assigned location on the SSC card. See Figure 62 on page 144.

Note: You must install the IP Expansion cabinet security device on the SSC card in each IP Expansion cabinet. The security device for the IP Expansion cabinets has NT_REM on it.

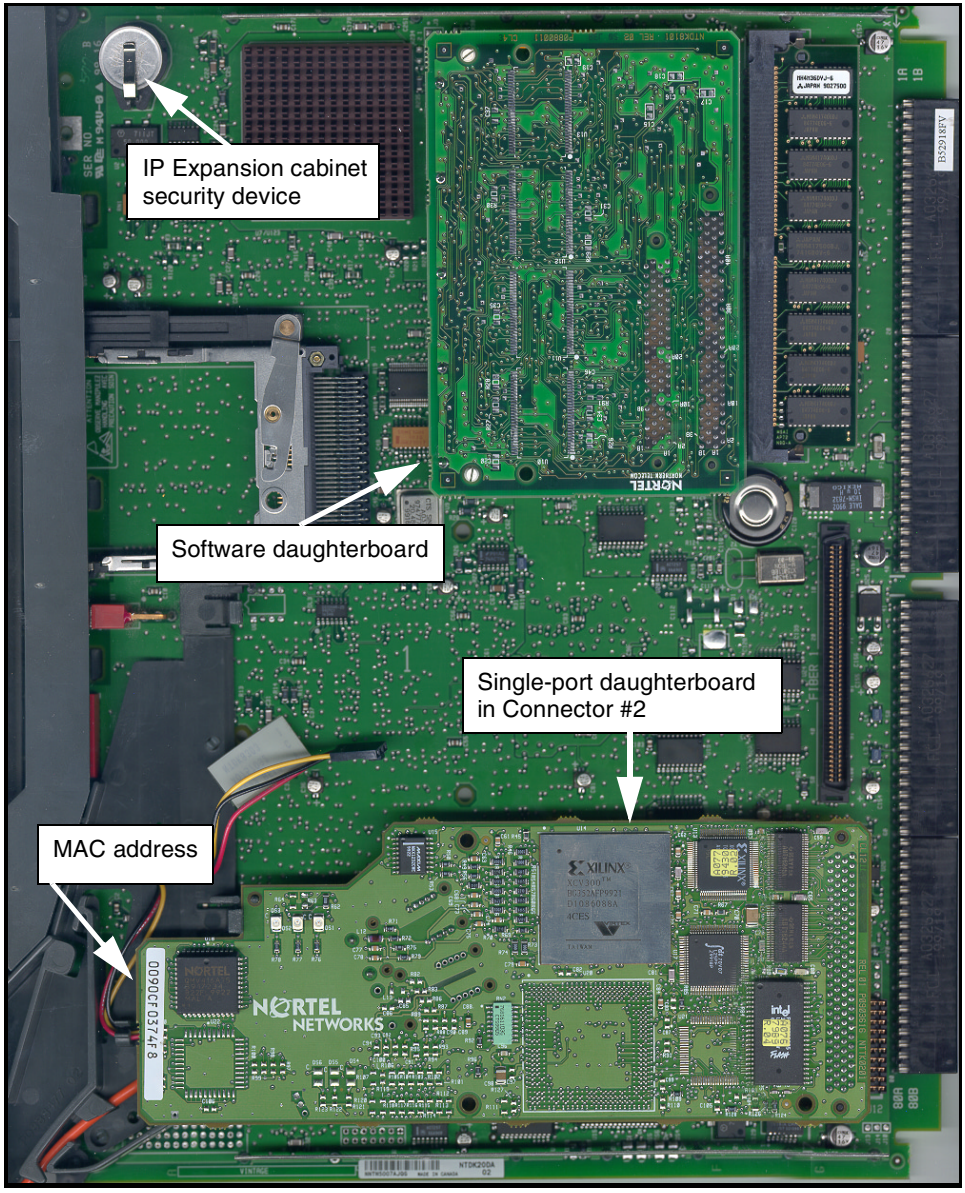
9 Install the NTTK13AA or NTTK25AA software daughterboard in the appropriate connector on the SSC card. See Figure 62 on page 144.

10 Install the EMC grounding clip on the stiffener rail of the cabinet.

The gounding clip is mounted on the front of the stiffener rail of the Option 11C IP cabinet. There is a small #4-40 screw to fasten the clip to the stiffener rail. The 100BaseT cable is then fed through and secured in the clip. Depending on what version of cabinet you have, the EMC grounding clip may already be installed on the stiffener rail. Refer to Figure 60 on page 140 for the correct grounding clip location.

If the EMC grounding clip is already installed, loosen the screws that secure it to the stiffener rail and rotate the clip to the outward position, in order to route cables

Figure 62
SSC card for the IP Expansion cabinet



.

CAUTION

You must install the EMC grounding clip to ensure electrical contact between the shield and the stiffener rail on the cabinet.

11 **Install the SSC card in slot 0 of the IP Expansion cabinet.**

12 **Route the cables coming from the SSC card through the EMC grounding clip.** See Figure 60 on page 140.

13 **Loop the excess cable around the cable routing guide a minimum of one complete loop.** See Figure 61 on page 141.

14 **Remove the single-port SDI cable, if equipped.**

15 **Replace the single-port SDI cable with the 3-port SDI cable.**

CAUTION

For the IP Expansion cabinet, use the 3-port SDI cable, regardless of the number of SDI ports configured. Do not connect the single-port cable to the IP Expansion cabinet, as the standard 9-pin signal assignment conflicts with the custom assignment

a If you are installing software from a Software Delivery card onto a blank NTTK13AA or NTTK25AA Software Daughterboard go to Procedure 25 on page 209.

b If you are installing software from a Pre-programmed Software Daughterboard, go to Procedure 32 on page 235.

16 **Go to Procedure 15 on page 161 to connect the Main cabinet to the IP Expansion cabinets.**

——————————— End of Procedure ———————————

Upgrading your Option 11C Mini system

Summary of items required

The following items are required to upgrade your Option 11C Mini system to support IP connectivity:

- NTDK20EA or later SSC card for each Mini Main and IP Expansion chassis
- The following daughterboards, depending on the type of connectivity:
  - NTTK01 single-port 100BaseF IP daughterboard
  - NTTK02 dual-port 100baseF IP daughterboard
  - NTDK99 single-port 100BaseT IP daughterboard
  - NTDK83 dual-port 100BaseT IP daughterboard

  Note: Other than the physical interface and number of ports, all variations of the IP daughterboards have the same functionality.
- The following cables for connecting the Main and IP Expansion cabinets in a point-to-point configuration:
  - A0817052 5-meter fiber cable with MT-RJ to ST connectors for connecting the Main and IP Expansion cabinets using the 100BaseF IP daughterboards and an A0346816 ST fiber coupler. The A0346816 fiber couplers allow two MT-RJ to ST cables to be connected to each other in a point-to-point configuration.
  - NTTK34AA 2-meter UTP CAT 5 RJ45 cross-over cable and NTDK8305 2-meter STP CAT 5 extension cable for connecting the Main and IP Expansion cabinets using the 100BaseT IP daughterboards
- The following cables for connecting the Main and IP Expansion cabinets over a data campus network:

— A0817052 5-meter fiber cable with MT-RJ to ST connectors for connecting the Main and IP Expansion cabinets using the 100BaseF IP daughterboards. The two A0817052 fiber cables are usually connected directly to the customer's LAN.

— NTDK8305 2-meter STP CAT 5 extension cable for connecting the Main and IP Expansion cabinets using 100BaseT IP daughterboards. A customer-supplied straight-through cable is used in place of the NTTK34AA 2-meter cross-over cable.

- NTTK24 Option 11C Mini cable routing guide
- NTTK13AA, NTTK25AA or later Software Daughterboard
- A EMC grounding clip is required for each 100BaseT Mini IP chassis.
- Software Delivery card

  Note: For IP connectivity, you must have a Software Delivery card with Release 25.30 or later software.

- Stand offs sent with the IP daughterboards
- NTBK48 3-port SDI cable for each IP Expansion chassis/cabinet
- NTDK57DA IP Expansion cabinet security device for the SSC card in each IP Expansion chassis

  Note: For the SSC card in the Main chassis, you must use the Security Device currently on the Mini System Controller (MSC) card.

Summary of steps

The following list summarizes the steps for upgrading your Option 11C Mini system to support IP connectivity.

1 Log onto the system and perform and datadump to backup existing customer data to the PCMCIA card.

1 Turn off the power from the Main and all expansion chassis.

2 Upgrade the hardware in the Main Chassis.

- **a** Replace the Mini System Controller (MSC) card with the Small System Controller (SSC) card (NTDK20EA or later).
- **b** Install 100BaseF or 100BaseT IP daughterboards on the SSC card.
- **c** If you have not already done so, replace the software daughterboard on the SSC card with the NTTK13AA or NTTK25AA software daughterboard.

3 For 100BaseF connections, install the NTTK24 chassis cable routing guide on the front of the chassis.

For 100BaseT connections, install only the EMC grounding clip on the front of the chassis.

4 Upgrade the hardware in the IP Expansion chassis.

- **a** Replace the fiber receiver card with an NTDK20EA or later SSC card.
- **b** Install a single-port 100BaseF or 100BaseT IP daughterboard in connector #2 on the SSC card.
- **c** Install the NTTK13AA or NTTK25AA software daughterboard on the SSC card.
- **d** Install the IP Expansion cabinet security device on the SSC card.

5 Install a EMC grounding clip in each 100BaseT Mini Main and Mini IP Expansion chassis.

Note: A EMC grounding clip is not required in the Mini Expander Chassis.

6 Connect the Main and IP Expansion chassis.

7 Power up the Main and IP Expansion chassis.

8 Check the Link LED on the daughterboards to make sure that the connections are established.

9 Upgrade system software. Refer to “Upgrade Option 11C/11C Mini software to a new release” on page 197.

Procedure 13
Upgrade an Option 11C Mini Main chassis to support IP connectivity

1 Do one of the following:

- If you are installing a new system with a SSC (NTDK20EA or later) card, go to Step 7.
- If you have an MSC card in your existing system, you must upgrade to the SSC (NTDK20EA or later) card. Go to Step 2.
- If your SSC card vintage is earlier than NTDK20EA in your system, you must upgrade to the SSC (NTDK20EA or later) card. Go to Step 2.

2 Log onto the Option 11C Mini System and perform a data dump.

a Load LD 43.

b Enter the **EDD** command.

c After the data dump finishes, exit LD 43 by entering “****”.

3 Backup customer data from the MSC or SSC to a PCMCIA card or with the Customer Configuration and Backup Restore feature. Refer to *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330).

Note: You will use the customer data file created with *Option 11C Customer Controlled Backup and Restore (CCBR)* (553-3011-330) to restore the original system data to the SSC card (NTDK20EA or later).

4 Turn off the power to the Option 11C Mini Main chassis and attach the antistatic wrist strap to your wrist.

CAUTION
Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the cards, be careful not to damage any of their components.

5 Log off of the system and unseat the MSC or earlier vintage SSC card.

6 Remove the security device from the MSC or earlier vintage SSC card.

Note: Your security device must be used on the SSC (NTDK20EA or later) card.

7 Take an NTDK20EA or later SSC card and place it on a clean, flat surface.

Note: For IP connectivity, you must install an SSC card in the Primary Main chassis.

8 Install the Software Daughterboard (NTTK13AA or NTTK25AA) in the appropriate connector on the SSC card. See "Software daughterboard on the SSC card" on page 154.

9 Install the Security Device in the appropriate socket on the SSC card. See "Software daughterboard on the SSC card" on page 154.

Note: If you have an MSC card, you must reuse its security device.

10 Remove any existing expansion daughterboards from the SSC card.

11 Remove the existing plastic standoffs used for fiber daughterboards from the SSC card.

12 Install the plastic standoffs that came with the IP expansion daughterboards.

13 Do one of the following:

- If you are installing 100BaseF daughterboards, go to Step 14.
- If you are installing 100BaseT daughterboards, go to Step 15.

14 Install the NTTK01 single-port 100BaseF IP daughterboard or the NTTK02 dual-port 100BaseF IP daughterboard in the appropriate connectors on the SSC card.

Note: The SSC card supports up to two daughterboards. The IP daughterboards can coexist with any of the existing Option 11C fiber daughterboards.

a Remove the protective plug from the MTRJ port on the daughterboard.

b Remove the protective cap from the A0817052 fiber cable end on the fiber cable.

c Insert the fiber cable end firmly into the MTRJ port on the daughterboard. Carefully pull on the cable to make sure that the cable is inserted completely.

Note: The top connector (Connector #1) on the SSC card is for Expansion cabinets 1 and 3. The bottom connector (Connector #2) on the SSC card is for Expansion cabinets 2 and 4. See Figure 63 on page 152.

When the daughterboard is installed on the SSC card, the upper MTRJ port is port 1, which is for Expansion cabinet 1.

d Insert the LED cable on the SSC card into the LED connector on the IP daughterboard (if the IP daughterboard is a dual-port IP daughterboard). If the IP daughterboard is a single-port daughterboard, do not use the LED cable. See Figure 63 on page 152.

The LED cable connection provides the second LED on the faceplate.

e Locate the plastic alignment pin on the daughterboard connector.

f Insert the plastic alignment pin into the appropriate hole on the daughterboard.

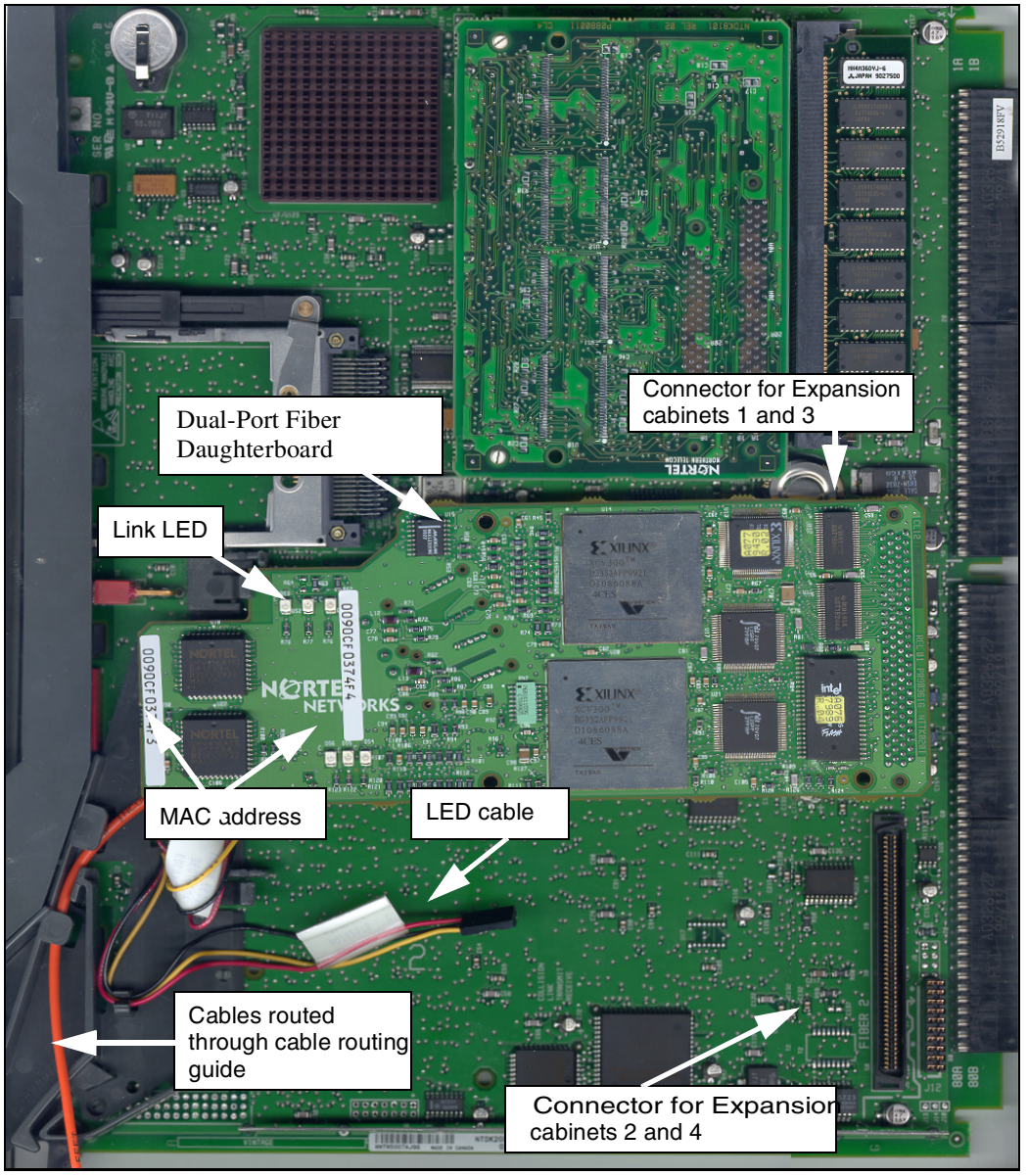
g Press the end of the daughterboard onto the daughterboard connector.

h Press the daughterboard onto the plastic standoffs to fasten the daughterboard securely to the SSC card.

i Route the fiber cable through the guide on the SSC card. See Figure 63 on page 152.

j Go to Step 16.

Figure 63
SSC card with Dual-port Fiber daughterboard for the Main chassis


Dual-Port Fiber Daughterboard
Connector for Expansion cabinets 1 and 3
Link LED
MAC address
LED cable
Cables routed through cable routing guide
Connector for Expansion cabinets 2 and 4

15 Install the NTDK99 single-port 100BaseT IP daughterboard or the NTDK83 dual-port 100BaseT IP daughterboard in the appropriate connectors on the SSC card.

Note: The SSC card supports up to two daughterboards. The IP daughterboards can coexist with any of the existing Option 11C fiber daughterboards.

a Insert the NTDK8305 extension cable end firmly into the RJ-45 port on the daughterboard. Make sure that the cable end is inserted completely.

Note: The top RJ-45 connector on the SSC card is for Expansion chassis 1 and 3. The bottom connector on the SSC card is for Expansion chassis 2 and 4.

When the daughterboard is installed on the SSC card, the upper MTRJ port is port 1, which is for Expansion chassis 1.

b Insert the LED cable on the SSC card into the LED connector on the IP daughterboard (if the IP daughterboard is a dual-port IP daughterboard). If the IP daughterboard is a single-port daughterboard, do not use the LED cable. Refer to Figure 63 on page 152.

The LED cable connection provides the second LED on the faceplate.

Note: If the IP daughterboard is a single-port daughterboard, do not use the LED cable.

c Locate the plastic alignment pin on the SSC card.

d Insert the plastic alignment pin into the appropriate hole on the daughterboard.

e Press the end of the daughterboard onto the daughterboard connector.

f Press the daughterboard onto the plastic standoffs to fasten the daughterboard securely to the SSC card.

g Route the extension cable through the guide on the SSC card. See Figure 63 on page 152.

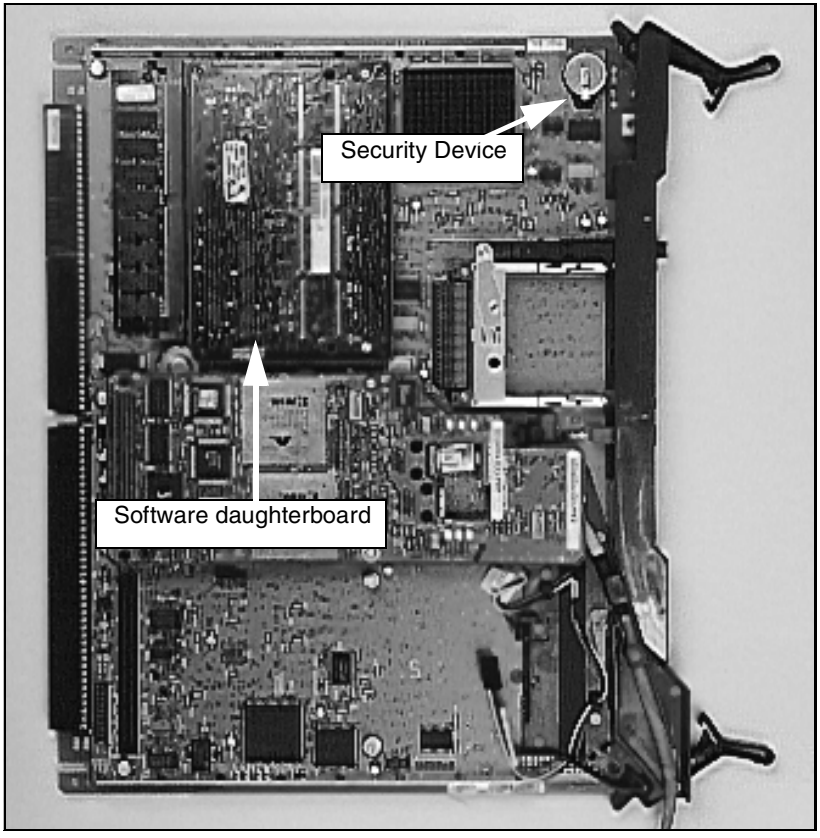
h Go to Step 16.

16 If you have not already done so, install the NTTK13AA or NTTK25AA Software Daughterboard in the appropriate connector on the SSC card. See Figure 64 on page 154.

17 If you have not already done so, install the Security Device in the appropriate socket on the SSC card. See Figure 64.

Note: For the Main chassis, you must use the existing Security Device on the Mini System Controller (MSC) card.

Figure 64
Software daughterboard on the SSC card



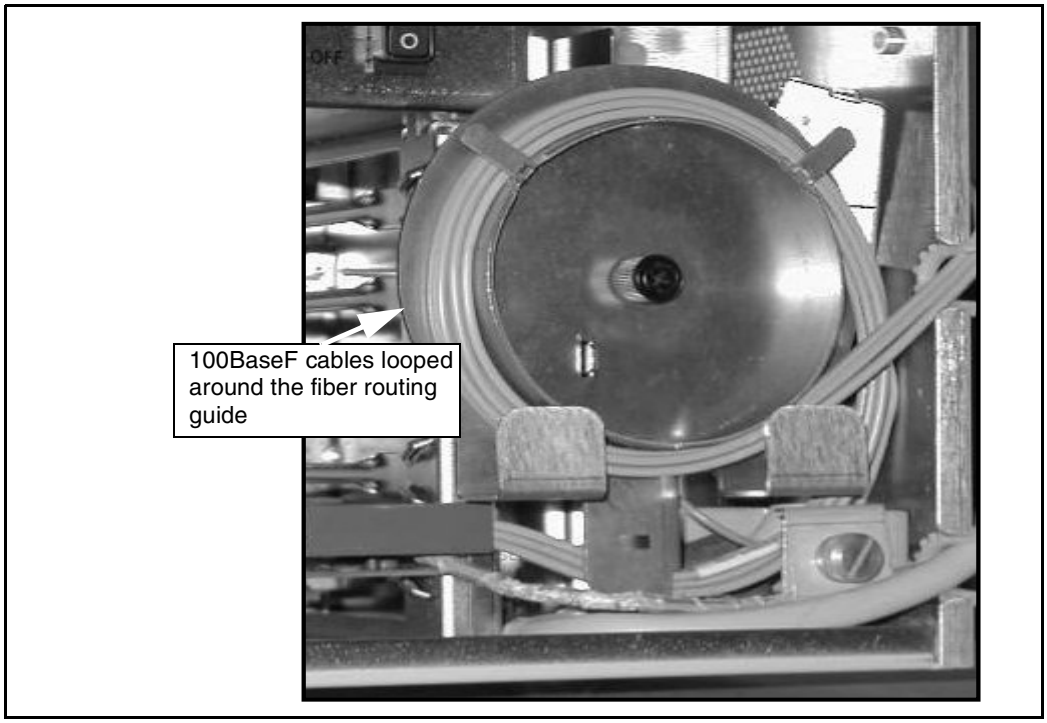
18 Install the SSC card in slot 0 of the chassis.

19 Do one of the following:

- For 100BaseF connections, install the chassis cable routing guide on the front of the chassis. Go to Step 20.
- For 100BaseT connections, install the EMC grounding clip on the front of the chassis. Go to Step 21.

20 **For 100BaseF connections, loop the fiber cables coming from the SSC card around the cable routing guide on the front of the chassis. A minimum of one complete fiber cable loop is required around the cable routing guide. See Figure 65.**

Figure 65
100BaseF cables looped around the cable routing guide on the front of the chassis



21 **For 100BaseT connections, the grounding clip is mounted on the fan baffle on the lower right hand side of the Mini Main chassis. See Figure 66 on page 156.**

Two #8-32 screws are used to attach the grounding clip to the fan baffle. The 100BaseT cable is then fed through and secured in the clip. See Figure 67 on page 157.

CAUTION

You must secure the 100BaseT extension cables to the EMC grounding clip on the front of the chassis to ensure electrical contact between the shield and the metal frame.

Figure 66
EMC grounding clip location

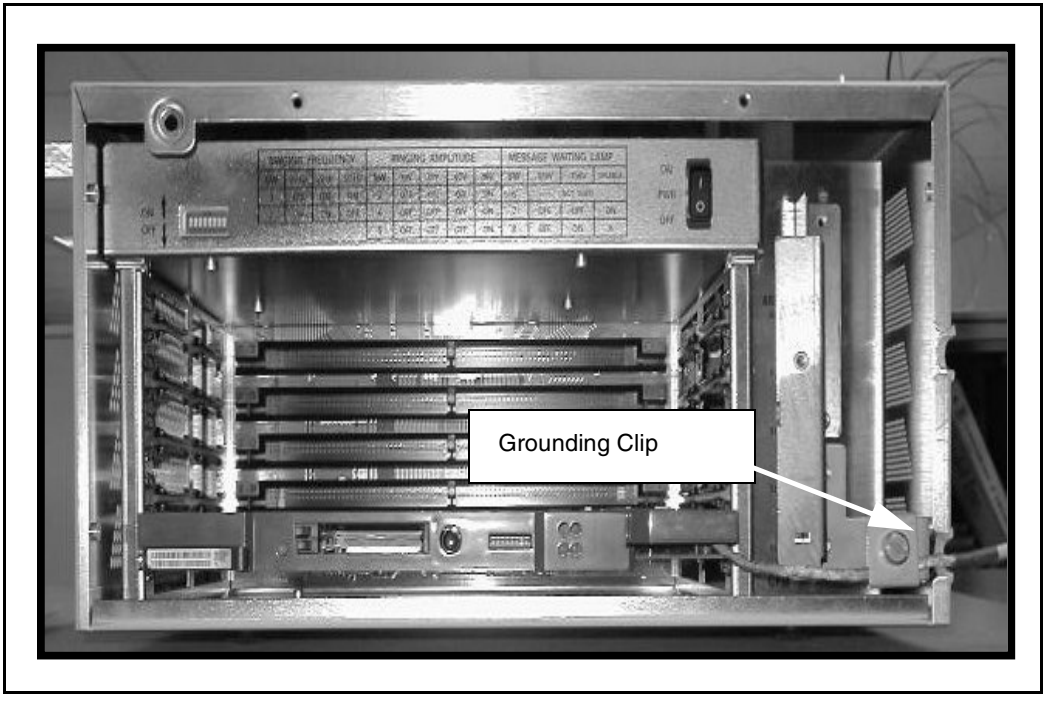
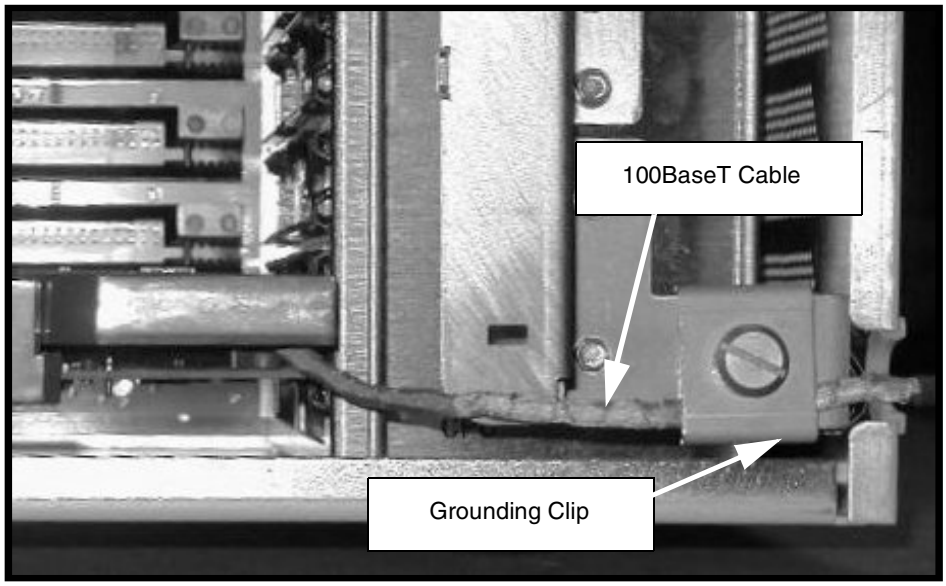


Figure 67
EMC grounding clip location and connection



22 Go to Procedure 14 on page 157 to upgrade the Option 11C Mini IP Expansion chassis.

Procedure 14
Upgrade an Option 11C Mini Expansion chassis to support IP connectivity

1 Disconnect the power from the IP Expansion chassis.

Set the power switch on the inside front panel to OFF.

2 Attach an antistatic wrist strap to your wrist.

CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the SSC card, be careful not to damage any of its components.

3 **Remove the fiber receiver card from slot 0 of the expansion chassis.**

4 **Place an NTDK20EA or later SSC card on a clean, flat surface.**

5 **Remove the existing plastic standoffs from the SSC card.**

6 **Install the plastic standoffs that came with the IP expansion daughterboards.**

7 **Do one of the following:**

- Install a 100BaseF single-port daughterboard in connector #2 on the SSC card. Refer to Step 14 on page 150 for instructions on how to install this daughterboard on the SSC card.

  After you have installed the 100BaseF daughterboard, continue with Step 8 on page 158.

- Install a 100BaseT single-port daughterboard in connector #2 on the SSC card. Refer to Step 15 on page 153 for instructions on how to install this daughterboard on the SSC card.

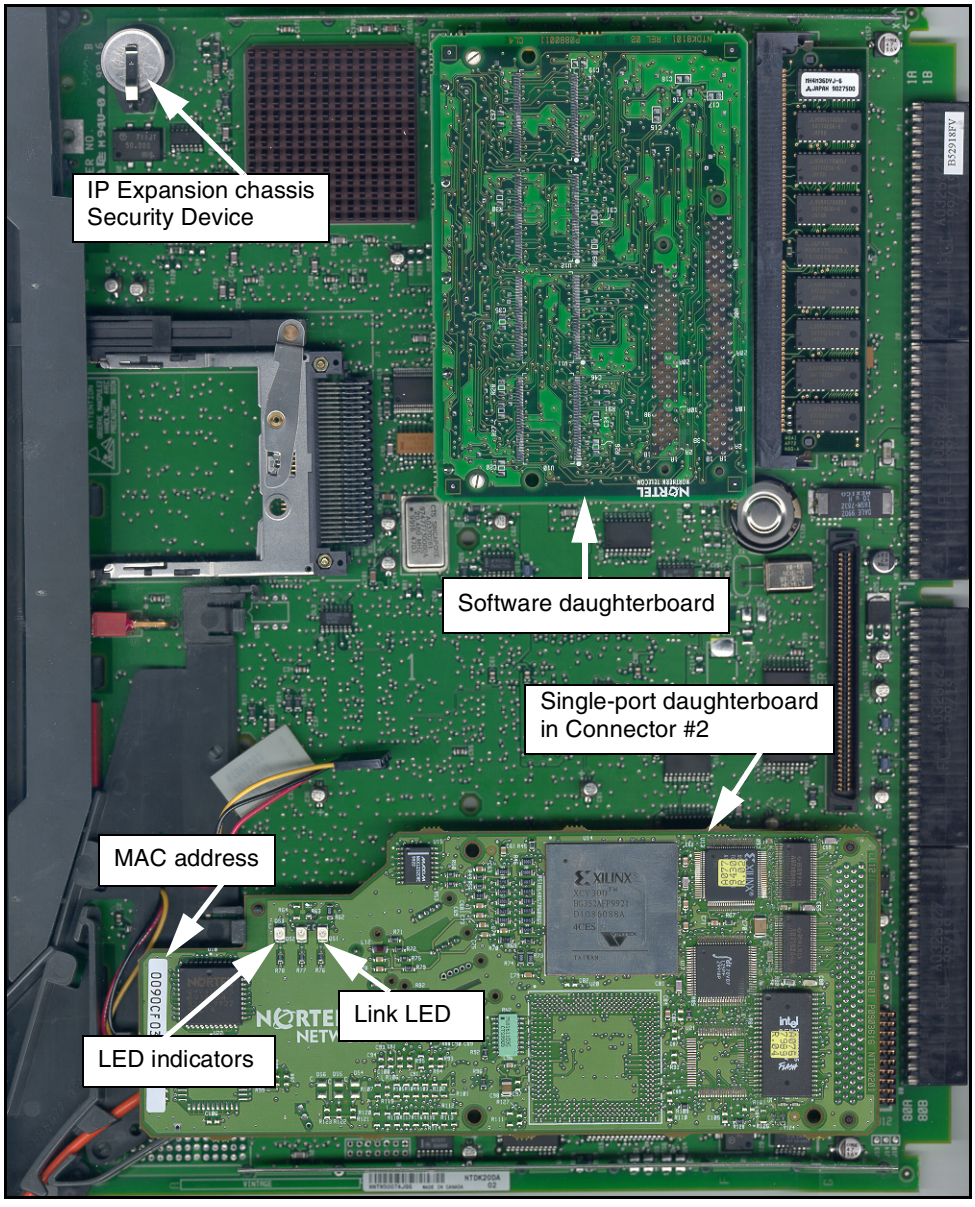
  After you have installed the 100BaseT daughterboard, continue with Step 8 on page 158.

Note: For IP Expansion cabinets, you must install the IP Expansion daughterboard in Connector #2 (the lower connector) to ensure clock synchronization.

8 Install the NTDK57DA IP Expansion cabinet security device in its assigned location on the SSC card. See Figure 68 on page 159.

Note: You must install the Security Device on the SSC card in each Expansion cabinet. The security device has NT_REM on it.

Figure 68
SSC card for the Expansion chassis



9 Install the SSC card in slot 0 of the chassis.

10 Do one of the following:

- For 100BaseF connections, install the chassis cable routing guide on the front of the chassis. Go to Step 11.
- For 100BaseT connections, install the EMC grounding clip on the front of the chassis.Go to Step 12 on page 160.

11 Loop the fiber cables from the SSC card around the cable routing guide on the front of the chassis. A minimum of one complete loop is required on the guide .See Figure 65 on page 155.

12 For 100BaseT connections, secure the 100BaseT extension cable coming from the SSC card to the EMC grounding clip on the front of the chassis with a plastic cable tie. See Figure 66 on page 156.

a If you are installing software from a Software Delivery card onto a blank NTTK13AA or NTTK25AA Software Daughterboard go to Procedure 25 on page 209.

b If you are installing software from a Pre-programmed Software Daughterboard, go to Procedure 32 on page 235.

CAUTION

You must secure the 100BaseT extension cables to the EMC grounding clip on the front of the chassis to ensure electrical contact between the shield and the metal frame.

13 Go to Procedure 15 on page 161 to connect the Option 11C Mini Main chassis to the Option 11C Mini IP Expansion chassis.

End of Procedure

Connect the Main and IP Expansion cabinets/chassis

Procedure 15
Connect the Main and IP Expansion cabinets/chassis

1 **Follow Procedure 11 through Procedure 14 in this chapter for upgrading your Option 11C cabinets or Option 11C Mini chassis to support IP connectivity. Then, continue with Step 2 below, for instructions on how to connect the Main and IP Expansion cabinets/chassis.**

2 **Do one of the following:**

- For point-to-point 100BaseF connectivity, go to Step 3.
- For point-to-point 100BaseT connectivity, go to Step 4.
- For 100BaseT or 100BaseF connectivity over a distributed data campus network, go to Step 5.

3 **For point-to-point 100BaseF connectivity, connect the Main cabinet/chassis to the IP Expansion cabinets/chassis using the A0817052 5-meter fiber cable with fiber couplers.**

a Use the supplied A034816 ST fiber couplers to connect the ST ends on the A0817052 fiber cables coming from the Main and IP Expansion cabinets/chassis. Use one coupler to connect Tx to Rx and another coupler to connect Rx to Tx. Use a push and twist motion to secure the couplers to the cable ends.

b Connect the fiber cable from the Main cabinet/chassis to the fiber cable from the IP Expansion cabinet/chassis.

Connect Transmit (Tx) to Receive (Rx) and Receive (Rx) to Transmit (Tx).

Note: The cable end labelled “A” is for Transmit (Tx) and the cable end labelled “B” is for Receive (Rx).

4 **For a point-to-point 100BaseT connectivity, connect the Main cabinet/chassis to the IP Expansion cabinets/chassis using the NTTK34AA 2-meter RJ45 cables and NTDK8305 2-meter extension cable.**

Use the supplied NTTK34AA 2-meter UTP CAT 5 RJ45 cross-over cable and NTDK8305 2-meter STP CAT 5 extension cable to connect the Main and IP Expansion cabinets using the 100BaseT IP daughterboards

5 For a distributed data network using 100BaseF or 100BaseT connectivity connect the Main and IP Expansion cabinets/chassis using the following cables:

- For 100BaseF connectivity, the A0817052 5-meter fiber cable with MT-RJ to ST connectors usually connect from the Fiber IP Daughterboard directly to the customer's LAN.
- For 100BaseT connectivity, the NTDK8305 2-meter STP CAT 5 extension cable connects the IP Daughterboard to a customer-supplied straight-through cable. The customer supplied straight through cable connects directly to the customers LAN.

For further information, refer to the *Option 11C and 11C Mini Technical Reference Guide* (553-3011-100).

6 Restore power to the Main and IP Expansion cabinets.

For Option 11C systems, set the circuit breaker switch on the front of the power supply in the cabinet to ON. If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to ON.

For Option 11C Mini systems, set the power switch on the inside front panel to ON.

7 Check the Link LED on the installed daughterboard. See Figure 68 on page 159.

From left to right, the LEDs are for the following:

- Receive LED
- Transmit LED
- Link LED (should be green)

  — If the Link LED is green, the Link is established.

  —If the Link LED is not lit, check the daughterboard installation. Check all cable connections to ensure that they are connected correctly. Make sure that the cables are not damaged. Refer to *Option 11C and 11C Mini Fault Clearing* (553-3011-500).

8 Refer to "Upgrade Option 11C/11C Mini software to a new release" on page 197 to upgrade the system software.

9 Refer to *X11 Maintenance* (553-3001-511) LD 117 to configure IP Expansion cabinets IP Address.

———————— *End of Procedure* ————————

Assign TDS/DTR, XTD, and SDI functions

Contents

This section contains information on the following topics:

Summary of procedures 164
Remove the NTAK03 TDS/DTR card 164
Remove the NT5K20/48 XTD card 168
Keep the TDS/DTR card while moving functions to the SSC card 170
Move TDS/DTR and keep SDI ports 170
Keep the TDS/DTR card while configuring additional units or ports on the SSC card 174

This chapter describes how to assign the TDS/DTR, XTD, and SDI functions to the NTDK20 Small System Controller (SSC) card.

> ***Note:*** This chapter applies when there are tone-related circuit cards remaining in the system.

The NTDK20 SSC card replaces the following cards:

- NTAK01 CPU/Conf card (used in Option 11)
- NTBK45 System Core card (used in Option 11E)

The NTDK20 SSC card can provide the same tone functions as the following cards:

- NTAK03 TDS/DTR
- NT5K20 XTD

- NTAG26 XMFR
- NT5K48 XTD

The NTDK20 SSC card also includes the SDI function.

After you upgrade the system to Option 11C, you can change the functions of any remaining TDS/DTR and XTD cards as follows:

- Remove any remaining NTAK03 TDS/DTR, NT5K20 XTD, NT5K21, NTAG26 XMFR, NT5K48 XTD cards and assign their functions to the NTDK20 SSC card.

  Note: Minimum version must be NTAK03DA.

- Move some of their functions to the NTDK20 SSC card.
- Assign additional functions to the NTDK20 SSC card.

Summary of procedures

The following procedures are in this chapter. These procedures describe how to change the tone and SDI functions to meet the different requirements of the Option 11C.

- Procedure 16 “Remove the NTAK03 TDS/DTR card” on page 165
- Procedure 17 “Remove the NT5K20/48 XTD card” on page 168
- Procedure 18 “Move TDS/DTR while keeping SDI ports” on page 171
- Procedure 19 “Move SDI ports while keeping TDS/DTR” on page 173
- Procedure 20 “Define TDS/DTR/XTD on the NTDK20 SSC” on page 174
- Procedure 21 “Define SDI ports 1 and 2” on page 176

Remove the NTAK03 TDS/DTR card

Perform this procedure to remove the NTAK03 TDS/DTR card and use the NTDK20 SSC card instead. Changing to the NTDK20 SSC card frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. The TDS must be assigned to the SSC card in slot 0 before the DTR units are programmed. In addition, the TDS/DTR card must be disabled before removing the TDS from its card slot.

Procedure 16
Remove the NTAK03 TDS/DTR card

1 Print the existing SDI configuration in LD 22.

Use the PRT request and ADAN or PRT type (depending on software release) to get a printout.

2 Disable the TDS/DTR card in LD 34.

Use the DISX N command where N is the card slot number of the TDS/DTR card.

3 Disable SDI ports 1 and 2 in LD 37.

Use the DIS TTY N command, where N is 1 and 2 (the SDI port number).

4 Configure TDS on the SSC card using LD 17.

LD 17 - Configure TDS on SSC card

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	0	Tone and Digit switch for the NTDK20 SSC card

5 Remove the eight DTR units on the TDS/DTR card using LD 13.

Make sure you remove all eight units.

LD 13 - Remove DTR units on the TDS/DTR card

Prompt	Response	Description
REQ	OUT	Remove information
TYPE	DTR	Digitone receivers data block
TN	c u	c = card slot of the TDS/DTR card u = 0 to 7 (Repeat until you remove all eight units.)

6 Configure the eight DTR units on the SSC card using LD 13.

Make sure you configure all eight units.

LD 13 - Configure DTR units on the SSC card

Prompt	Response	Description
REQ	NEW	Add information
TYPE	DTR	Digitone Receivers data block
TN	c u	c = 0 u = 0 to 7 (Repeat until you configure all eight units.)

7 Remove the TDS function using LD 17.

Note: If you do not first disable the TDS in LD 34 (see Step 2 on page 165), this step will fail. This step will also fail if you do not first remove the DTRs from the TDS/DTR slot.

LD 17 - Remove TDS

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	Xn	n = 1 to 9 (TDS card slot location). Put an X before to remove.

8 Remove the SDI ports using LD 17.

To remove TTY ports 1 and 2, do the following for each port:

LD 17 - Remove SDI ports 1 and 2

Prompt	Response	Description
REQ	CHG	Change
TYPE	ADAN	Change I/O device
ADAN	OUT TTY X	X = 1 X = 2

9 Remove the NTAK03 TDS/DTR card from the cabinet.

10 Configure SDI ports 1 and 2 on the SSC card using LD 17.

Refer to the SDI printout obtained from Step 1 on page 165.

LD 17 - Configure SDI ports 1 and 2

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
ADAN	NEW TTY X	X = 1 X = 2
CDNO	0	Card number 0
PORT	X	X= 1 X = 2
DES	aaa...a	AML port identification (can be up to 16 alphanumeric characters)
BPS	150, 300, 600, 1200, 2400, (4800), 9600, 19200, 38400	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits

PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto enable SDI port
USER	BUG, SCH, MTC	

11 Enable the SDI ports in LD 37.

Use the commands “ENL TTY 1” and “ENL TTY 2.”

12 Enable the TDS/DTRs on the SSC card using LD 34.

Use the “ENLX 0” command.

13 Perform an EDD backup in LD 43.

Use the “EDD” command.

End of Procedure

Remove the NT5K20/48 XTD card

Perform this procedure to remove the NT5K20 XTD or NT5K48 XTD card and assign its functions to the NTDK20 SSC card instead. This procedure frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. You must assign the TDS to the SSC card in slot 0 before you program the XTD units.

Procedure 17
Remove the NT5K20/48 XTD card

1 Remove the eight XTD units on the NT5K20/48 card using LD 13.

Make sure you remove all eight units.

LD 13 - Remove XTD units on NT5K20/48 card

Prompt	Response	Description
REQ	OUT	Remove information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c = card slot of the XTD card u = 0 to 7 (Repeat until you remove all eight units)

2 Configure TDS on the SSC card using LD 17.

LD 17 - Configure TDS on the SSC card

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	0	Tone and Digit switch for the NTDK20 SSC card

3 Configure the eight XTD units on the SSC card using LD 13.

Make sure you configure all eight units.

Note: You must configure the TDS loop in LD 17 before you can do this step.

LD 13 - Configure XTD units on SSC card

Prompt	Response	Description
REQ	NEW	Add information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c = 0 u = 0 to 7 (Repeat until you configure all eight units.)
XTDT	(0)-7	Extended Tone Detector Table Number. If you enter a table that is not 0, it must be in LD 97.
_DTO	(NO), YES	Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection

4 Remove the NT5K20 or NT5K48 XTD card from the cabinet.

5 Perform an EDD backup in LD 43.

Use the “EDD” command.

End of Procedure

Keep the TDS/DTR card while moving functions to the SSC card

Perform the procedure described in this section if you plan the following upgrade conditions:

- You plan to keep the NTAK03DA (minimum version) TDS/DTR card in the system.
- You plan to move one of the its TDS/DTR or SDI port functions to the NTDK20 SSC card.

Move TDS/DTR and keep SDI ports

To move TDS/DTR, you must remove the TDS/DTR function from the NTAK03 TDS/DTR card and then assign it to slot 0.

Note: Perform the steps below in the order indicated. You must assign the TDS to the SSC card in slot 0 before you program the DTR units. You must disable the TDS/DTR card before removing the TDS from that card slot.

Procedure 18
Move TDS/DTR while keeping SDI ports

1 Disable the NTAK03 TDS/DTR card in LD 34.

Use the DISX N command where N is the card slot number of the TDS/DTR card.

2 Configure TDS on the SSC card using LD 17.

LD 17 - Configure TDS on SSC card

Prompt	Response	Descriiption
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	0	Tone and Digit switch for the NTDK20 SSC card

3 Remove the eight DTR units on the TDS/DTR card using LD 13.

Make sure you remove all eight units.

LD 13 - Remove DTR units on TDS/DTR card

Prompt	Response	Description
REQ	OUT	Remove information
TYPE	DTR	Digitone receivers data block
TN	c u	c = card slot of the TDS/DTR card u = 0 to 7 (Repeat until you remove all eight units.)

4 Configure the eight DTR units on the SSC card using LD 13.

Make sure you configure all eight units.

Note: You must configure the TDS loop in LD 17 before performing this step.

LD 13 - Configure DTR units on SSC card

Prompt	Response	Description
REQ	NEW	Add information
TYPE	DTR	Digitone receivers data block
TN	c u	c = 0 u = 0 to 7 (Repeat until you configure all eight units.)

5 Remove the TDS function using LD 17.

Note: This step fails if you do not first disable the TDS in LD 34 (see Step 1 on page 171). This step also fails if you do not first remove DTRs from the TDS/DTR slot.

LD 17 - Remove TDS

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	Xn	n = 1 to 9 (TDS card slot location) Put an X before to remove

6 Enable the NTAK03 TDS/DTR to use the SDI port.

7 Enable the TDS/DTRs on the SSC card in LD 34. Use the "ENLX 0" command.

8 Perform an EDD backup in LD 43.

———————————— *End of Procedure* ————————————

Procedure 19
Move SDI ports while keeping TDS/DTR

1 Disable SDI ports 1 and 2 in LD 37.

Use the DIS TTY N command, where N is the SDI port number.

2 Remove the SDI ports using LD 17.

To remove TTY ports 1 and 2, follow the instructions for each port:

LD 17 - Remove SDI ports 1 and 2

Prompt	Response	Description
REQ	CHG	Change
TYPE	ADAN	Change I/O device
ADAN	OUT TTY X	X=1 X=2

3 Configure SDI ports on the SSC card using LD 17.

LD 17 - Configure SDI ports on SSC card

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
ADAN	NEW TTY X	X=1 X=2
CDNO	0	Card number 0
PORT	X	X=1 X=2
DES	aaa...a	AML port identification (can be up to 16 alphanumeric characters)
BPS	150, 300, 600, 1200, 2400, (4800), 9600, 19200, 38400	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits
PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto enable SDI port
USER	BUG, SCH, MTC	

End of Procedure

Keep the TDS/DTR card while configuring additional units or ports on the SSC card

Follow this procedure to do all of the following:

- keep the NTAK03 TDS/DTR card
- keep the NT5K48 XTD card
- take advantage of additional units or ports

Because these cards are already programmed, you must move their functions to the NTDK20 SSC card.

Procedure 20
Define TDS/DTR/XTD on the NTDK20 SSC

1 Configure TDS by entering 0 at the TDS prompt in LD 17.

LD 17 - Configure TDS

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
CEQU	YES	For changes to common equipment
TDS	0	Tone and Digit switch for the NTDK20 SSC card

2 Configure the DTR units on card 0, units 0 through 7 in LD 13.

This step only applies if you use DTR. If you use XTD instead, skip this step and go to Step 3 on page 175.

Note: Systems in North America normally use DTRs and allow the card to operate as a standard DTMF receiver. This step only applies if you are using a DTR. If you use an XTD instead, skip this step and continue to Step 3 on page 175.

LD 13 - Configure DTR units on card 0

Prompt	Response	Description
REQ	NEW	Add
TYPE	DTR	Define Digitone receivers
TN	0 u	Card 0, u = 0-7

3 Configure the XTD units on card 0, units 0 through 7 in LD 13. Make sure you configure all eight units. (Do not perform this step if you are using DTR instead of XTD—you completed the procedure in Step 2).

Note: Systems outside North America normally use XTDs. Do not perform this step if you use a DTR instead of an XTD (see Step 2 on page 175).

LD 13 - Configure XTD units on card 0

Prompt	Response	Description
REQ	NEW	Add information
TYPE	XTD	Extended Dial Tone Detector and Digitone Receiver data block
TN	c u	c = 0 u = 0 to 7 (Repeat until you configure all eight units)
XTDT	(0)-7	Extended Tone Detector Table Number. If you enter a table that is not 0, it must exist in LD 97.
_DTO	(NO), YES	Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection

End of Procedure

Procedure 21
Define SDI ports 1 and 2

1 Load LD 17.

2 Configure SDI ports 1 and 2 as shown.

LD 17 - Configure SDI ports 1 and 2

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
ADAN	NEW TTY X	X=1 X=2
CDNO	0	Card number 0
PORT	X	X=1 X=2
DES	aaa...a	AML port identification (can be up to 16 alphanumeric characters)
BPS	150, 300, 600, 1200, 2400, (4800), 9600, 19200, 38400	Bits per second data rate
BITL	5, 6, 7, (8)	Data bit length
STOP	(1), 1.5, 2	Number of stop bits
PARY	ODD, EVEN, (NONE)	Parity
ENL	(YES), NO	Auto-enable SDI port
USER	BUG, SCH, MTC	

End of Procedure

Option 11/11E upgrade from Software Daughterboard or PCMCIA Card

Contents

This section contains information on the following topics:

Summary of steps 178
Upgrade the software 179

General information

This chapter describes how to upgrade an existing Option 11 or 11E to Option 11C using the Software Daughterboard or Software Delivery Card. The Personal Computer Memory Card (PCMCIA) is the Software Delivery Card.

Manufacturers and distributors ship the Software Daughterboard to the customer site already programmed. This is the method used in most cases.

CAUTION

You need a Software Daughterboard, Security Device, and Keycode Data Sheet to correctly install the software. You need a Keycode Data Sheet to complete the installation. Refer to the Keycode Data Sheet when entering the ISM parameters, adding packages, or changing the AUX ID.

Keycode Information

Data you need to enter during the software installation is provided on the Keycode Datasheet.

If the keycodes are unsuccessful, check the following:

- software issue
- feature set name
- any additional packages
- TNs
- ISM parameters
- security ID
- auxiliary ID (the old site ID, if this is an upgrade)
- ensure the correct keycodes were entered. All items must match the Keycode Datasheet exactly.

For an Option 11C Mini system, check that the number of TNs has been entered correctly from the keycode sheet.

When performing a new system installation, please ensure that the default AUX ID matches the AUX ID from the Keycode Datasheet.

If they still are not successful, then call your Service Representative.

Summary of steps

The following list reviews the software installation steps:

1 Install the Software Daughterboard and Security Device.

2 Select the System Upgrade function.

3 Select the feature set and packages.

4 Select a database.

5 Select Incremental Software Management (ISM) parameters.

6 Validate keycodes.

7 Load the software.

> **CAUTION**
> Put on the antistatic wrist strap provided in the bottom of the cabinet before handling circuit cards. Static electricity can damage the components of power supplies and circuit cards.

Upgrade the software

The following procedure describes how to upgrade to Option 11C software system..

> **IMPORTANT**
> The Main cabinet software must be installed or upgraded prior to the IP Expansion cabinets. Please ensure the Main Cabinet installation or upgrade is complete and the Main Cabinet is up and running prior to loading the Expansion cabinets. Please note: Expansion cabinets can be installed in any order.

Procedure 22
Upgrade Option 11C software

1 Install the Software Daughterboard and Security Device on the NTDK20 Small System Controller (SSC) card.

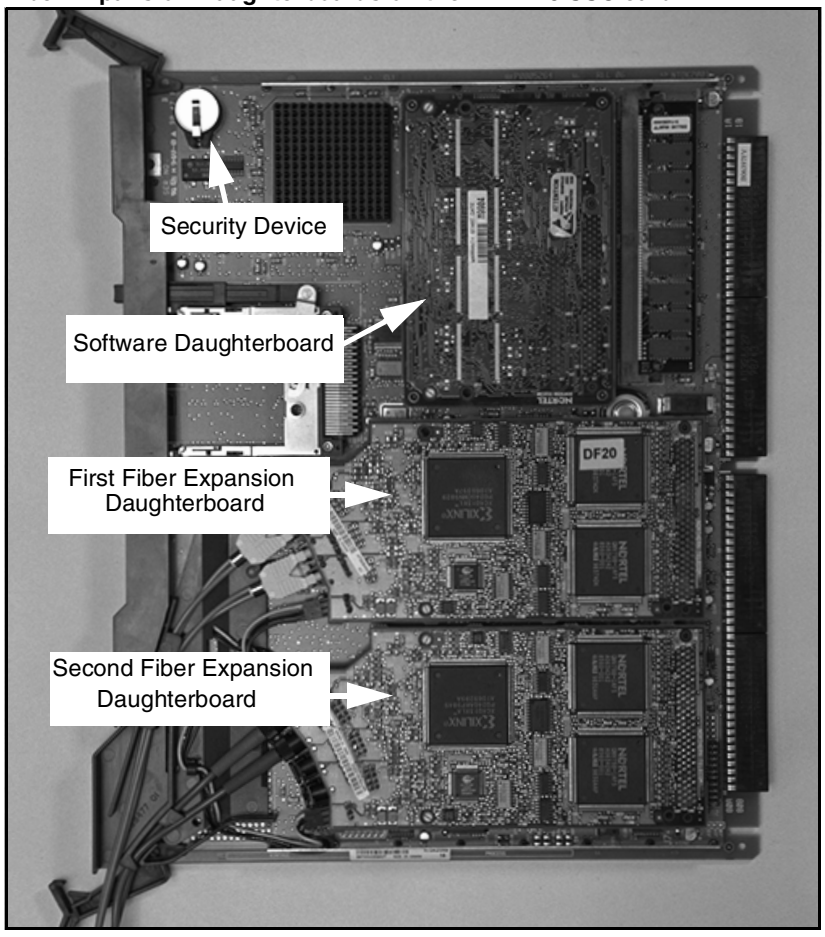
To install the Software Daughterboard and Security Device, refer to Figure 69 on page 180 and follow these steps:

a Put on the antistatic wrist strap and insert the Software Daughterboard in the connector on the component side of the SSC card.

b Install any required expansion daughterboards.

c Insert the Security Device in the socket on the component side of the SSC card.

Figure 69
Fiber Expansion Daughterboards on the NTDK20 SSC card



2 Install the NTDK20 Small System Controller (SSC) card in its slot (slot 0) of the main cabinet.

Note: If a fiber-optic cable is present, place it in the fiber routing guide.

3 Power up the system.

To power up the system:

a Connect the power to the cabinet.

b Set the circuit breaker on the front of the power supply unit to ON.

4 Observe the terminal screen.

One of the following two messages appears and the software installation continues as indicated:

- If the message is

INSERT SOFTWARE DELIVERY CARD

continue with Step 5 on page 181.

- If the message is

INSTALL SETUP PROGRAM

go to Step 6 on page 183.

5 If you need to, install the software delivery card in the socket in the faceplate of the SSC card.

Note: Skip this step unless you are using the software delivery (PCMCIA) card to install the software.

To install the software delivery card:

a Insert the card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 Small System Controller (SSC) card.

b Carefully press on the software delivery card until it seats tightly. Refer to Figure on page 182 for the correct position of the SSC card.

Figure 70
PCMCIA card slot location

6 Select item 1 or 2 from the Main Cabinet Software Installation Menu.

The system displays the Software Installation Main Menu.

```
Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card
[q]uit, [h]elp or [?], <cr> - redisplay
```

- To select Option 11/11E upgrade from Software Daughterboard:
  - **a** Type **1** and press <CR>.
  - **b** Go to Step 8 on page 183.
- To select System Upgrade:
  - **a** Type **2** and press <CR>.
  - **b** Continue with the next step in this procedure.

7 Select type of upgrade to perform.

The system will display type of upgrade to be performed options.

```
Select type of upgrade to be performed:
1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/Parameter Upgrade
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay
```

To select Option 11/11E to Option 11C:

a Type **1** and press <CR>.

8 Select the feature set to be enabled.

Note: The feature set you select must match the one provided with keycodes. The following feature set names are examples only.

Example of screen display for feature sets:

```
Select Feature Set You Wish to Enable:
1. General Business (NTSKxxxx)
2. Enhanced Business (NTSKxxxx)
3. Enterprise (NTSKxxxx)
4. NAS/VNS (NTSKxxxx)
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection:
```

To select Enhanced Business, for example, type **2** and press <CR>.

9 Indicate if you are adding packages or not.

The screen display shows, for example, feature set Enhanced Business:

Feature Set Selection: Enhanced Business

Do you wish to add packages?

Select no, yes or abort:

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 11 on page 185
- Type **y** (for yes), press <CR>, and continue with the next step, Step 10 on page 184
- Type **a** (for abort) and press <CR>. Abort returns you to the Main Menu.

10 Select the Feature packages to add.

Summary of packages selected is, for example:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 98-104 107-111 113-116 118-120 122-125 127-129 131-133 135 137-141

Enter the package(s) you want to add, and then press <CR>.

Type, for example, **215-235** and press <CR>.

Note: Press <CR> to end selection entry or if you are not adding any packages.

11 Confirm feature set and packages.

Sample screen display:

Your Feature Set Selection is “Enhanced Business”:

Additional Packages selected: 215-235

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 100-104 107-111 113-116 118-120 122-125 127-129 131-133 135 137-141

...

...

200-208 215-235

Is this selection correct?

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 8 on page 183.
- Type **y** (for yes), press <CR>, and continue with the next step, Step 12 on page 185.
- Type **a** (for abort, return to Main Menu).

12 Select a database.

Do one of the following:

- If you are installing from a software delivery (PCMCIA) card, go to Step 16 on page 187.
- If you are installing from a Software Daughterboard continue here:

The screen displays:

Select database to Install:

1. Pre-Configured database - Enhanced Business

2. Basic Configuration

3. CCBR Restore File

4. Option 11/11E Software Cartridge

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection: **3 or 4 <cr>**

Select option 3 or 4 and press <CR>:

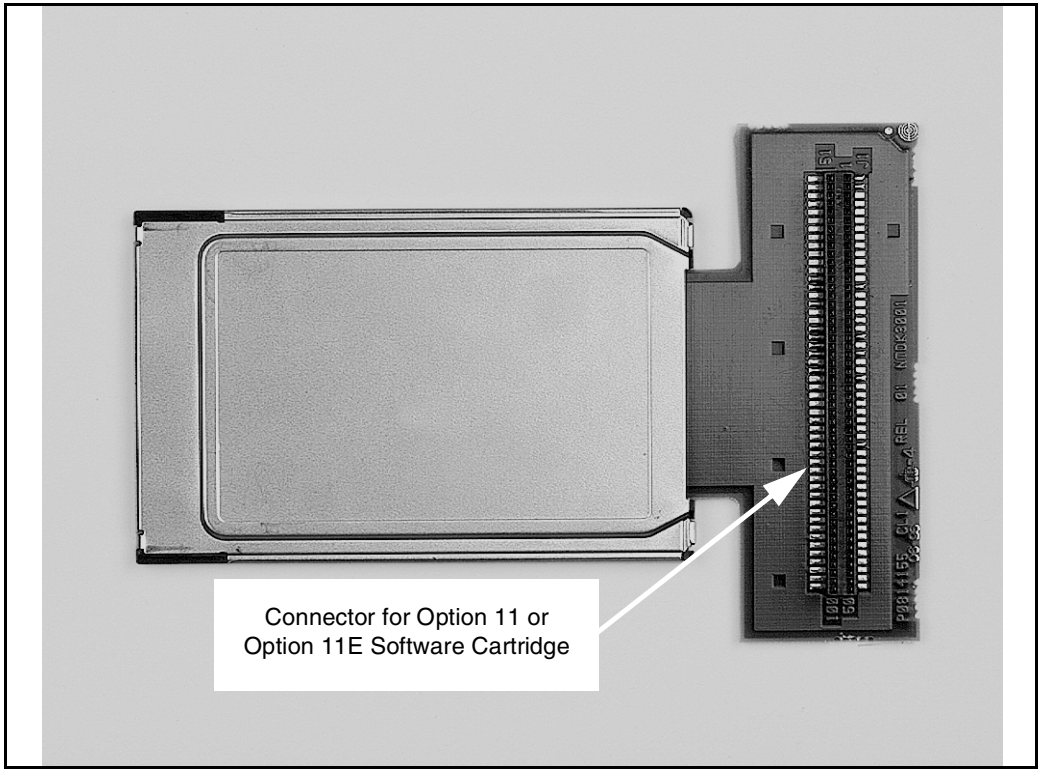
- If your selection was CCBR Restore File, go to Step 17 on page 188.
- If your selection was Option 11/11E Software Cartridge continue with the next step, Step 13 on page 186.

13 Connect the Option 11/11E Software Cartridge to the Database Upgrade Tool.

Do one of the following:

- If you are using the CCBR Restore file as a database source, complete Step 17 on page 188, then do Step 18 on page 188.
- If you are using the Option 11/11E software cartridge as a database source, refer to Figure 71. The figure shows the correct connection of the software cartridge to the Database Upgrade Tool.

Figure 71
Database Upgrade Tool NTDK30AA



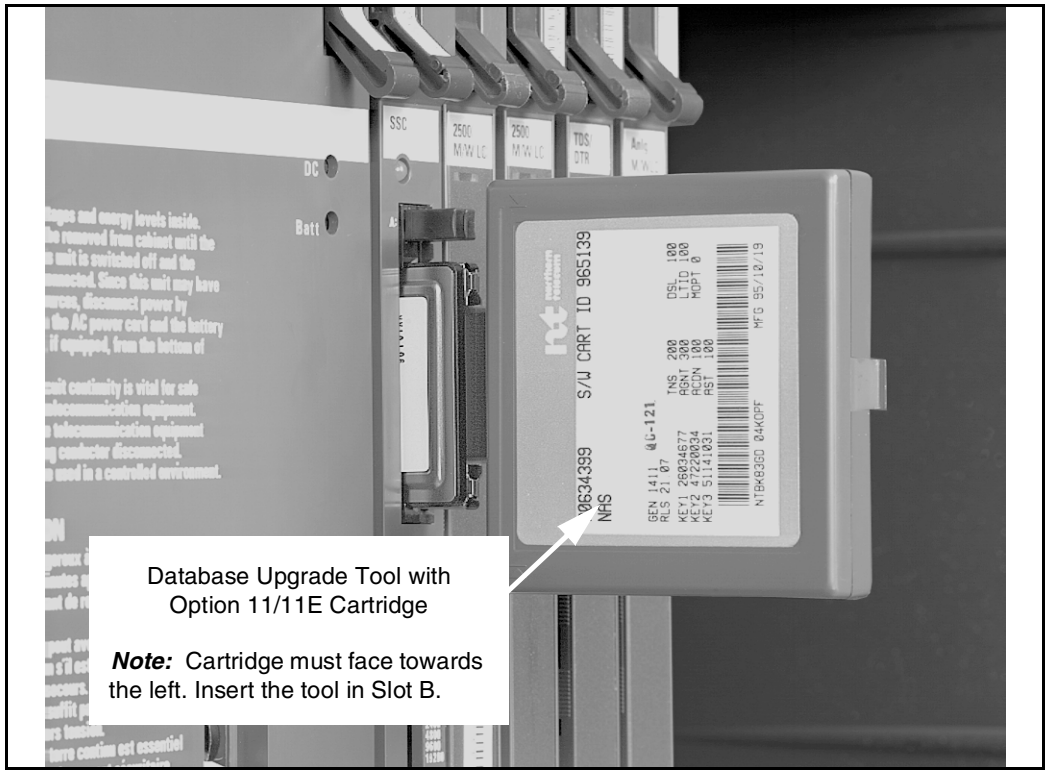
14 Install the Database Upgrade Tool and cartridge. See Figure 72.

The following text appears on the terminal:

Insert the Database Upgrade Tool with the attached Option 11/11E cartridge into Slot B. Press Enter, <CR>, to continue.

15 After you press <CR>, go to Step 17 on page 188.

Figure 72
Database Upgrade Tool inserted with cartridge



16 Select a database using the PCMCIA card.

Do one of the following:

- If you are installing from a Software Daughterboard, go to Step 12 on page 185.
- If you are installing from a Software Delivery (PCMCIA) card, continue here:

Screen displays:

```
Select Option 11/11E Database Source:

1. CCBR Restore file

2. Option 11/11E Software Cartridge

[q]uit, [m]ain, [[p]revious menu, <cr> - redisplay

Enter Selection:
```

Select 1 or 2, and press <CR>.

- If you select **1 <CR>** (CCBR Restore file), continue with the next step, Step 17 on page 188.
- If you select **2 <CR>** (Option 11/11E Software Cartridge), go to Step 13 on page 186.

17 Confirm database selection.

Screen displays:

```
Warning: you must have an Option 11/11E database.

Do you wish to continue?
```

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 12 on page 185.
- Type **y** <CR> (for yes), press <CR>, and go to Step 18 on page 188.
- Type **a** <CR> (abort, return to Main Menu).

18 Review ISM parameters.

Note: On a new installation, the ISM parameters displayed on the terminal screen are the default settings related to the Feature Set selection. You can accept these settings without changes or change the settings to meet the requirements of the new system.

Current ISM Parameters:

TNS	(100)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(0)

Note: The above underscores represent a space.

Do you wish to change ISM parameters?

n <cr> (no change)

y <cr> (change)

a <cr> (abort, return to main menu)

If the response was **YES** go to Step 19 on page 189.

If the response was **NO** go to Step 21 on page 191.

19 Select ISM parameters.

Example screen display in which the TN and Survivability ISM parameters have changed.

Enter new ISM parameters, <cr> to leave as is:

TNS	(100) 200
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(0) 4

20 Confirm ISM parameters.

New ISM parameters are:

TNS	(200)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(4)

Is this correct?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu)

If the response was **NO** go to Step 18 on page 188.

If the response was **YES** go to Step 21 on page 191.

21 Define the AUX ID.

Note: The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.

Example screen display:

```
Security ID: xxxxxxxx
```

```
Current AUX ID: xxxxxxxx

Do you wish to change the AUX ID?
```

Do one of the following:

- Enter **y <CR>** (yes) and continue to Step 22 on page 192.
- Enter **n <CR>** (no) and go to Step 23 on page 192.
- Enter **a <CR>** (abort, return to main menu).

22 Enter the AUX ID.

```
Enter the Option 11/11E Security ID for the new AUX ID,
<cr> to maintain

xxxxxxxx <CR>

New AUX ID: xxxxxxxx

Is this correct?
```

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 23 on page 192.
- Enter **n <CR>** (no) and go to Step 21 on page 191.
- Enter **a <CR>** (abort, return to main menu).

23 Review and confirm information entered.

The screen displays either the Software Upgrade Summary or the software release information to allow you to review and confirm data entered.

Example Software Upgrade Summary display:

```
Software Upgrade Summary:
Security ID:xxxxxxxx
Aux ID:xxxxxxxx
Added Pkgs:xxx - xxx
Feature Set:Enhanced Business
Database:Company.ABC
```

Example software release information display.

Note: The screen displays both the old and the new parameters.

```
S/W Release: 253xx
```

ISM Parameters:

TNS	(200)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(4)

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue to Step 24 on page 194.
- Enter **n <CR>** (no) and go to Step 8 on page 183.
- Enter **a <CR>** (abort, return to main menu).

24 Enter the keycodes.

Note: See Keycode Information on page 178 for important information on Keycodes.

a Enter keycodes instead of **x, y, z** shown in the following example.

Enter new Keycodes:

Key 1:xxxxxxxx <CR>
Key 2:yyyyyyyy <CR>
Key 3:zzzzzzzz <CR>

b Look for the keycode validation message.

After you enter the last keycode, the system displays a message indicating if the keycodes are successful or not. See the following message examples.

- Example successful screen message:

Keycode validation successful

WARNING A system restart will be invoked as part of the software installation process".

- Example unsuccessful screen message:

Keycode validation unsuccessful

c Do one of the following:

- If the **successful** message appears, go to Step 25 on page 195.
- If the **unsuccessful** message appears, repeat this step, Step 24 on page 194.

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

25 Complete the software installation.

Example screen display:

Are you sure you wish to perform the installation?

Do one of the following:

- Enter **y <CR>** (yes). The Software Installation Program finishes.
- Enter **n <CR>** (no) and go to Step 6 on page 183.
- Enter **a <CR>** (abort, return to Main Menu).

26 Refer to the Software Input/Output Guides to complete customer database programming.

———————— ***End of Procedure*** ————————

Upgrade Option 11C/11C Mini software to a new release

Contents

This section contains information on the following topics:

Reference list 197
Summary of items required 199
Upgrade the software 199
Summary of steps 200
Upgrade procedures 203
Revert to the previous release of software 231
For an upgrade that was done using a PCMCIA card 231
Software installation on the IP Expansion Cabinet using the Preprogrammed software daughterboard 235

Reference list

The following are the references in this section:

- *Option 11C and 11C Mini Fault Clearing* (553-3011-500)
- *Option 11C Planning and Installation* (553-3021-210)

This chapter describes how to upgrade the software on the Option 11C Main Cabinet, Option 11C Mini Chassis or an IP Based Option 11C system to another release using the Software Installation Program. This program is menu-driven and includes a Help facility to help you make correct selections.

IMPORTANT

The Main cabinet software must be installed or upgraded prior to the IP Expansion cabinets. Please ensure the Main Cabinet installation or upgrade is complete and the Main Cabinet is up and running prior to loading the Expansion cabinets. Please note: Expansion cabinets can be installed in any order.

This chapter contains the following procedures:

- For the Option 11C and Option 11C Mini, see Procedure 23 through Procedure 26. These procedure describes how to upgrade the software on an existing Option 11C or Option 11C Mini to Release 25.30 or later software. The procedures are as follows:
  - — how to identify the type of Software Daughterboard installed in your system.
  - — How to verify and/or upgrade the Flash Boot ROM to support the NTTK13AA or NTTK25AA Software Daughterboard.
  - — How to upgrade the NTDK21 or NTDK81 Software Daughterboard to the NTTK13AA or NTTK25AA .
  - — How to upgrade the software using a PCMCIA card on the Main Cabinet.

  Note: Prior to Release 25, Option 11C Mini systems do not support the SSC card.

- For the Option 11C with Option 11C IP Expansion cabinet see Procedure 23 through Procedure 28. These procedure describes how to upgrade the software on an existing Option 11C and Option 11C IP Expansion Cabinet to Release 25.30 or later softawre. The procedures are as follows:
  - — how to identify the type of Software Daughterboard installed in your system.
  - — How to verify and/or upgrade the Flash Boot ROM to support the NTTK13AA or NTTK25AA Software Daughterboard.

  - — How to upgrade the NTDK21 or NTDK81 Software Daughterboard to the NTTK13AA or NTTK25AA.
  - — How to upgrade the software using a PCMCIA card on the Main Cabinet.
  - — Upgrade the software on the IP Expansion Cabinet.

- For the active Option 11C with Option 11C IP Expansion Cabinet(s) refer to Procedure 29 or Procedure 30. This procedure describes how to upgrade/reinstall the software to Release 25.30 and later.
- For the Option 11C and Option 11C Mini, Procedure 31 on page 232 describes how to revert to the previous software version.

CAUTION

To complete the upgrade, you must have a new Keycode Data Sheet and one of the following:

• Software Delivery (PCMCIA) card

• Software Daughterboard programmed with the new software release.

Refer to the Keycode Data Sheet when you enter the ISM parameters, add packages, or change the AUX ID.

Summary of items required

You need the following items to perform software upgrades:

- Software Delivery (PCMCIA) card containing the new software, or a Software Daughterboard programmed in advance, or a blank PCMCIA Card and access to Nortel Network's Electronic Software Distribution website to download the applicable software to your software daughterboard.
- Keycode Data Sheet
- TTY terminal connected to port 0

Upgrade the software

This section gives a summary of the steps and the upgrade procedures.

Summary of steps

The following list reviews the steps you need to follow to upgrade from one software release to another:

1 Check, and if necessary, update the boot ROM code (see "Reason for updating the boot code" on page 200).

2 Check the capacity of the installed daughterboard or installed Mini System Controller (MSC) card.

3 Install the Software Delivery card.

4 Call up the Software Installation Program.

5 Make any changes to the feature set.

6 Select a database.

7 Make any changes to the ISM parameters.

8 Validate the keycodes.

• Load the software.

CAUTION

Please read this important message on software upgrades

Nortel Networks recommends that you upgrade the boot code to the latest release when you upgrade the software. The boot code is on the programmed PCMCIA card. Please refer to Nortel Networks NTP's for installation instructions.

UPGRADE method: Log in to the system and select LD 143. Type UPGRADE to access the Installation Program.

Note: You cannot use the UPGRADE command to upgrade correctly from Release 22 to 23; 22 to 24; or 23 to 24. The Sysload Method must be used.

SYSLOAD method: Toggle the power supply to OFF and then to ON. During the reboot, press Ctrl I to access the Installation Program.

9 Reason for updating the boot code

The boot code on the existing Option 11C SSC card must be NTDK34FA Release 07 or later to support the NTTK13AA or NTTK25AA Flash Daughterboard and Release 25 or later features.

See Table 5 for the required software releases and the minimum releases of boot code.

Table 5
Required software releases and minimum releases of boot code

Daughterboard/ Controller card	Software release	System	Minimum release of boot code
NTDK21AA	Release 22-23	Option 11C	Any
NTDK81AA	Release 23-24	Option 11C	NTDK34AA Rel 09 or higher (See note 2)
NTDK97AA	Release 24 only	Option 11C Mini	NTDK34FA Rel 03
NTDK97AB	Release 24-25 and later	Option 11C Mini	NTDK34FA Rel 07
NTDK97AC	Release 24-25 and later	Option 11C Mini	NTDK34FA Rel 07
NTTK13AA	Release 25	Option 11C	NTDK34FA Rel 07 or higher (See note 2)
NTTK25AA	Release 25.3 and later	Option 11C	NTDK34FA Rel 07 or higher

Note 1: NTDK34FA also supports the NTDK81AA and the NTTK13AA.

Note 2: The NTTK13AA daughterboard is backward compatible for use as a replacement for the NTDK81AA daughterboard.

Software Daughterboard Compatibility

The following identifies the existing software daughterboards and the software releases they are compatible with:

Table 6

Software Daughterboard	Capacity	Introduced on	Compatible with
NTDK21AA	32 Meg	Release 22.08D	Release 22.08D - 23.55
NTDK81AA	40 Meg	Release 23.18	Release 22.18 - 24.24
NTTK13AA	48 Meg	Release 24.24	Release 24.24 and higher
NTTK25AA	48 Meg	Release 25.30	Release 25.30 and higher

Reason for checking Software Daughterboard capacity

For Release 25 or later, your system must have a 32 Mb configuration for the program store and 16 Mb of C: drive flash. You must upgrade Option 11C systems that have the original NTDK21 or NTDK81 Software Daughterboard to the NTTK13AA or NTTK25AA daughterboard. The NTDK21 and NTDK81 were delivered on systems with Release 24 or earlier software.

When you upgrade to a new software daughterboard (NTTK13AA or NTTK25AA), follow Procedure 25 on page 209. If you are not changing daughterboards, follow Procedure 26 on page 210.

Reason for checking the Mini System Controller capacity

For Release 25, your system must have a 32 Mb configuration for the program store and 16 Mb of C: drive flash. The MSC card installed in slot 0 of the Main Chassis meets these requirements. If you need to check a remote system to determine which version of MSC is installed, perform the following steps:

1. Log in to the system.
2. Go into LD 135.
3. Enter **STAT MEM**.

   Note: If the Mini Main Chassis is equipped with a SSC card, refer to Procedure 23 on page 204.

If the output indicates that the flash drive is 8 Mb, the system has an NTDK97AA MSC card. If the output indicates that the flash drive is 16 Mb, the system has an NTDK97AB or NTDK97AC card.

If your system has an NTDK97AB or NTDK97AC card, go to Procedure 26 on page 210. If your system has an NTDK97AA, replace this version with an NTDK97AB or NTDK97AC. To do this, refer to the *Option 11C and 11C Mini Fault Clearing* (553-3011-500).

Upgrade procedures

The following procedures describe how to upgrade and install the software using a Software Daughterboard or a Software Delivery (PCMCIA) card.

The procedures provided in sequence in this section include:

- Procedure 23, Identify the type of Software Daughterboard installed in your system. on page 204
- Procedure 24, Verify and/or upgrade the Flash Boot ROM to support the NTTK13AA or NTTK25AA Software Daughterboard on page 205
- Procedure 25, Upgrade the NTDK21 or NTDK81 Software Daughterboard to the NTTK13AA or NTTK25AA. on page 209
- Procedure 26, Upgrade the software using a PCMCIA card on the Main Cabinet on page 210
- Procedure 28, Upgrade the software on the IP Expansion Cabinet using the Software Delivery Card. on page 225
- Procedure 29, Upgrade/reinstall software on active Option 11C system Using Manual Configuration. on page 228
- Procedure 30, Upgrade/reinstall software on active Option 11C system with Survivable IP Expansion Cabinet(s) on page 230
- Procedure 31, Revert to previous software procedure on page 232
- Procedure 32, Software installation for IP expansion, using the preprogrammed software daughterboard

Procedure 23
Identify the type of Software Daughterboard installed in your system.

1 Check the existing program store.

a Log in to the switch and access overlay program 135 (LD 135).

b Type the following at the prompt:

stat mem

The output indicates the amount of program store available on the system.

- If the output indicates that the program store size is 24 Mb, the system has an NTDK21. Please refer to Procedure 24 on page 205 and Procedure 25 on page 209 to upgrade your Software Daughterboard.
- If the output indicates that the program store size is 32 Mb and the C: drive flash is 8 Mb, the system has an NTDK81. Please refer to Procedure 24 on page 205 and Procedure 25 on page 209 to upgrade your Software Daughterboard.
- If the output indicates that the program store size is 32 Mb and the C: drive flash is 16 Mb, the system has an NTTK13AA or NTTK25AA. Go to Procedure 24 on page 205 and verify you have the correct Flash Boot ROM version.

End of Procedure

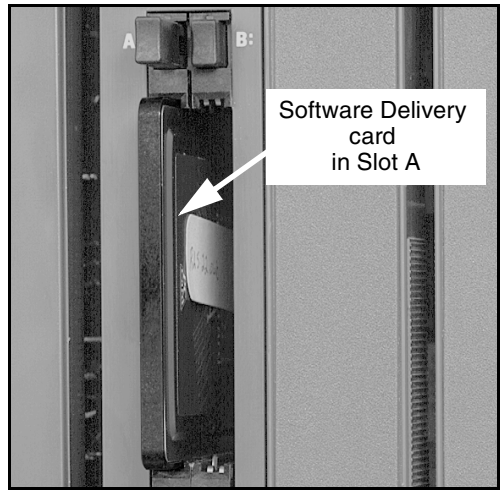
Procedure 24
Verify and/or upgrade the Flash Boot ROM to support the NTTK13AA or NTTK25AA Software Daughterboard

1 Insert the Software Delivery card for the required release of software in slot A in the PCMCIA socket located in the NTDK20 SSC faceplate. See Table 7 on page 208 for the required release of software.

See Figure 73 on page 205 for the correct position.

Note: Carefully press on the PCMCIA card until it seats tightly.

Figure 73
Software Delivery Card



2 Call up the Software Installation Program using LD 143 and select the Utilities (item 3) option.

Issue the UPGRADE command in LD 143. Look for the following message:

Main Cabinet Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>- redisplay

Enter Selection: 3

- If the screen displays the message, select item 3 and continue with Step 3.
- If the screen does not display the message, repeat Step 2 (this step) and make sure you enter the correct information.

3 Select the Flash Boot ROM Utilities (item 7) from the Utilities menu.

The Utilities menu options are listed:

Utilities Menu:

1. Restore Backed Up Database
2. Archive Database Utilities
3. Install Archived Database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages
10. IP FPGA Utilities
[q]uit, [p]revious, [m]ain, [h]elp, or [?], <cr>- redisplay

Enter Selection: 7

4 List Flash Boot ROM (item 1) from the Flash Boot ROM Utilities menu.

The Flash Boot ROM Utilities menu displays:

```
Flash Boot ROM Utilities Menu:
1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>- redisplay

Enter Selection: 1

Flash Boot ROM Summary:

Active -- NTDK34FA_r07
Backup -- NTDK34AA_r08
```

Note: It is possible that there is nothing in the Backup boot ROM. However, the Software Delivery card shows the version that Table 7 gives or a higher release number. If the release number is lower, you cannot upgrade. Check the Software Delivery card for authenticity.

5 Verify your Flash Boot ROM code output from Step 4 with the Software you are loading.

Use Table 7 on page 208 to determine if you have to update your Boot Code. If your Boot Code is current, this procedure is at an end. Continue with Procedure 25 on page 209.

CAUTION

If the release number and boot code version on the Software Delivery card is greater than the active version shown, perform the upgrade.

If the release number and boot code version on the Software Delivery card is less than the active version shown, do not perform the upgrade.

Table 7
Minimum boot code requirements for the Software Release

Software you are loading	Minimum boot code required
Pre-Release 23	Any
Release 23	NTDK34AA Release 09
Release 24	NTDK34FA Release 03
Release 25	NTDK34FA Release 07

Note: All versions of boot code are backwards-compatible.

6 Upgrade the Flash Boot ROM (item 2) and select yes to perform the upgrade.

The Flash Boot ROM Utilities menu displays:

Flash Boot ROM Utilities Menu:
1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>- redisplay

Enter Selection: 2

Are you sure you wish to perform the Flash Boot ROM Upgrade/Restore (y/n/[a]bort): **Y**

Upgrading Active FLash Boot ROM to NTDK34FA_r07

System Restart required to activate Flash Boot ROM Upgrade.

7 Restart the system to activate the Flash Boot ROM upgrade.

Go to Procedure 25 on page 209 to Upgrade the Software Daughterboard.

——————————— End of Procedure ———————————

Procedure 25
Upgrade the NTDK21 or NTDK81 Software Daughterboard to the NTTK13AA or NTTK25AA.

If you already have a NTTK13AA or NTTK25AADaughterboard and you have upgraded your Flash Boot ROM go to Procedure 26 on page 210.

1 Change the Software Daughterboard.

Note: Prior to Release 25, Option 11C Mini systems do not support the SSC card.

a Power down the system.

b Remove the NTDK20 SSC card.

c Remove the NTDK21or NTDK81 from the SSC card and replace it with the NTTK13AA or NTTK25AA.

d Install the NTDK20 SSC card in slot 0 of the main cabinet.

e Power up the system.

2 From the software installation main menu, do the following:

a From the Main Menu, select “New System Installation - From Software Daughterboard” (item 1).

b Go to Step 5 on page 210 if the Installation menu appears

The card appears on the Install menu if the target software came programmed in advance on a new Software Daughterboard (NTSKxxAJ or higher).

3 If the system has an NTTK13AA or NTTK25AA blank daughterboard, insert the Software Delivery card with Release 25.30 or later software into slot A of the SSC card. Proceed with Step 4 on page 209.

4 From the Main Menu, select “New System Installation - From Software Delivery Card” (item 4).

5 Continue with the Installation menu selections as described for a new system installation in Chapter 18 of the *Option 11C Planning and Installation* (553-3021-210). When prompted for the selection of database, select “Basic Configuration” (item 2).

CAUTION

It is important that you select “Basic Configuration” at this point. If you do not, the system can start an EDD after loading the new software and overwrite the customer data stored on the CPU.

6 After you install the software and reboot the system, you must restore the customer's backup configuration files.

a Log in and load LD 143 to access the Main Menu.

b Select “Utilities” (Item 3).

c Select “Restore” (Item 1).

d Select “Backup Flash Drive” (Item 1).

e Confirm Restore Database from the Backup Flash Drive.

f Reboot system by powering down and up.

End of Procedure

Procedure 26
Upgrade the software using a PCMCIA card on the Main Cabinet

Note: For Option 11C systems, this procedure requires that the NTTK13AA or NTTK25AA Software Daughterboard is on the SSC card. To check that you have installed the NTTK13AA or NTTK25AA, see Procedure 23 on page 204.

1 Perform a data dump (EDD).

a Load LD 43 or 143.

b Enter command **EDD**.

2 Disable all DCHs using LD 60.

3 Disable any AML links using LD 48.

4 Insert the Software Delivery card in slot A in the PCMCIA socket. Locate the PCMCIA socket in the faceplate of the Option 11C NTDK20 SSC or the Option 11C Mini NTDK97 MSC card.

See Figure 73 on page 205 for the correct position.

Note: Carefully press on the PCMCIA card until it seats tightly.

- **Select the method of starting the Software Installation Program.**.

CAUTION
Please read this important message on software upgrades

Nortel Networks recommends that you upgrade the boot code to the latest release when you upgrade the software. The boot code is on the programmed PCMCIA card. Please refer to Nortel Networks NTP's for installation instructions.

UPGRADE method: Log in to the system and select LD 143. Type UPGRADE to access the Installation Program.

Note: You cannot use the UPGRADE command to upgrade correctly from Release 22 to 23; 22 to 24; or 23 to 24. The Sysload Method must be used.

SYSLOAD method: Toggle the power supply to OFF and then to ON. During the reboot, press Ctrl I to access the Installation Program.

5 There are two methods of starting the Software Installation Program:

- Use the UPGRADE command in LD 143. Continue to the next step.
- Press Ctrl+I when prompted during a SYSLOAD (go to Step 2 on page 206).

6 Log in to the system.

a Type **LOGI** and press <CR>.

`PASS?` displays.

b Respond to prompt.

Note: The response to `PASS?` is distinct in each system. The following response is an example only.

```
PASS?
0000 <CR>
LD 143 <CR>
UPGRADE <CR>
```

7 Call up the Software Installation Program during a SYSLOAD.

During SYSLOAD, the following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

Note: Perform this step when starting the Software Installation Program during a **SYSLOAD**. To start the program using LD 143, ignore this step and do Step 6 on page 212 instead.

For Option 11C systems, start a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

For Option 11C Mini systems, start a system reload (SYSLOAD) by turning the power switch located on the inside front panel to OFF and then to ON.

Note: A software upgrade can take from 20 to 30 minutes.

8 Select System Upgrade (item 2) from the Main Cabinet Software Installation Main Menu.

The Main Cabinet Software Installation Menu options are displayed:

```
Main Cabinet Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr> - redisplay
```

Enter Selection: 2

9 Select the Option 11C New Software Upgrade (item 2) from the Select type of upgrade to be performed menu.

The Select type of upgrade to be performed menu is displayed:

```
Select type of upgrade to be performed:
1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/Parameter Upgrade
```

Enter Selection: 2

```
*** NOTE: The following questions require information on the Keycode Data
Sheet.
Please have it available. ***
```

10 Select the Feature Set to Enable.

Example screen display for Selecting the Feature Set You Wish to Enables as follows:

```
Select Feature Set You Wish to Enable:
1. General Business (ntskxxxx)
2. Enhanced Business (ntskxxxx)
3. Enterprise Business (ntskxxxx)
4. NAS/VNS (ntskxxx)
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr> - redisplay
```

Enter Selection: 1

Feature Set Selection: Enhanced Business

Note: The feature set you select is provided with your keycode information.

11 Select the packages you want to add, if any.

Example screen display for adding packages is as follows:

Do you wish to add packages? (y/n/[a]bort): **Y**

Summary of packages
0-2 4-5 7-14 16-21 ...

Enter additional packages: <cr> to continue
100 <cr>

Your feature set is Enhanced Business:
Additional packages selected:
100

Summary of packages:
0-2 4-5 7-14 16-21 100 ...

Is this correct? (y/n/[a]bort): **Y**

12 Review ISM parameters.

The ISM parameters displayed on the terminal screen are the default settings connected with the feature set selection. You can accept these settings without changes, or change them to meet the requirements of the system.

Example screen display for ISM parameters:

```
Current ISM Parameters:
```

TNS	(100)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(0)

Do you wish to change ISM parameters? (y/n/[a]bort):

Do one of the following:

- Enter **n <CR>** (no change) and go to Step 15 on page 217.
- Enter **y <CR>** (change) and continue with the next step, Step 13 on page 215.

13 Select ISM parameters.

Example screen display in which the TN and Survivability ISM parameters have changed.

```
Enter new ISM parameters, <cr> to leave unchanged::
```

TNS	(100) 200
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(0) 4

14 Confirm the ISM parameters.

Example screen display of the new ISM parameters:

```
New ISM parameters::

TNS                          (200)
ACDN                         (300)
AST                          (100)
LTID                         (100)
RAN CON                      (12)
RAN RTE                      (2500)
MUS CON                      (100)
BRAND                        (0)
ACD AGENTS                   (300)
ANALOGUE TELEPHONES          (2500)
ATTENDANT CONSOLES           (2500)
BRI DSL                      (100)
CLASS TELEPHONES             (2500)
DATA PORTS                   (2500)
DIGITAL TELEPHONES           (2500)
INTERNET TELEPHONES          (0)
PHANTOM PORTS                (2500)
WIRELESS TELEPHONES          (2500)
WIRELESS VISITORS            (0)
ITG ISDN TRUNKS              (2500)
TRADITIONAL TRUNKS           (2500)
TMDI D-CHANNELS              (100)
SURVIVABILITY                (4)

Is this correct? (y/n/[a]bort): Y
```

Do one of the following:

- Enter **n <CR>** (no) and go to Step 12 on page 214.
- Enter **y <CR>** (yes) and continue with Step 15 on page 217.
- Enter **a <CR>** (abort, return to Main Menu).

15 Define the Auxiliary Identification (AUX ID).

The default AUX ID is either the security ID provided with the Option 11C or Option 11C Mini, or the original Option 11/11E site ID.

Note 1: The AUX ID is on your Keycode Data Sheet. The AUX ID must match either the security ID (Option 11C or Option 11C Mini) or the original site ID (Option 11 or Option 11E).

Note 2: For the Option 11C Mini, the Security ID and the Current AUX ID numbers are always the same.

Example screen display:

```
Security ID: xxxxxxxx
Current AUX ID: xxxxxxxx
Do you wish to change the AUX ID? (y/n/[a]bort)
```

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 16 on page 218.
- Enter **n <CR>** (no) and go to Step 17 on page 218.
- Enter **a <CR>** (abort, return to Main Menu).

16 Enter the AUX ID.

Example screen:

```
Enter the Option 11/11E Security ID for the new AUX
ID, <cr> to maintain.
```

New AUX ID: xxxxxxxx

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 17 on page 218.
- Enter **n <CR>** (no) and go to Step 15 on page 217.
- Enter **a <CR>** (abort, return to Main Menu).

17 Review and confirm the information you entered.

Example screen display:

Software Upgrade Summary:
Security ID: xxxxxxxx
Aux ID: xxxxxxxx
Cabinet Type: MAIN
Feature Set: Enhanced Business
Additional Pkgs: none
Database: Pre-Configured Database - Enhanced Business

S/W Release: 254xx
ISM Parameters::

TNS	(200)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(4)

Is this correct? (y/n/[a]bort):

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 18 on page 220.
- Enter **n <CR>** (no) and return to the start of this step.
- Enter **a <CR>** (abort, return to Main Menu)

18 Enter the keycodes.

Note: See Keycode Information on page 178 for important information on Keycodes.

a Enter keycodes instead of **x, y, z** in the following example.

Enter new Keycodes:

Key 1:xxxxxxxx <cr>
Key 2:yyyyyyyy <cr>
Key 3:zzzzzzzz <cr>

b Look for the keycode validation message.

After you enter the last keycode, the system displays a message indicating whether the keycodes are successful or not. See the following message examples.

- Example of a successful screen message:

Keycode validation successful

WARNING A system restart will be invoked as part of the software installation process".

- Example of an unsuccessful screen message:

Keycode validation unsuccessful

c Do one of the following:

- If the **successful** message appears, continue with the next step, Step 19 on page 220.
- If the **unsuccessful** message appears, repeat step, Step 18 on page 220.

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

19 Complete the software installation.

Example screen display:

Are you sure you wish to perform the installation?

Do one of the following:

- Enter **y <CR>** (yes). This procedure is at an end and a system restart is required.
- Enter **n <CR>** (no) and make the necessary changes to your installation.
- Enter **a <CR>** (abort)

End of Procedure

Upgrade software on the IP Expansion Cabinet

The procedures detailed in this section are specific for upgrading the software on IP Expansion Cabinet(s). The procedures are as follows:

- "Verify\Upgrade the Boot Code on the SSC card in the IP Expansion Cabinet" on page 222.
- "Upgrade the software on the IP Expansion Cabinet using the Software Delivery Card." on page 225
- "Upgrade/reinstall software on active Option 11C system Using Manual Configuration." on page 228.
- "Upgrade/reinstall software on active Option 11C system with Survivable IP Expansion Cabinet(s)" on page 230.

Procedure 27
Verify\Upgrade the Boot Code on the SSC card in the IP Expansion Cabinet

Note: This procedure is performed from a TTY connected to the IP Expansion Cabinet.

1 Call up the Software Installation Program during a SYSLOAD.

During SYSLOAD, the following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

Note: Perform this step when starting the Software Installation Program during a **SYSLOAD**. To start the program using LD 143, ignore this step and do Step 6 on page 212 instead.

For Option 11C systems, start a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

For Option 11C Mini systems, start a system reload (SYSLOAD) by turning the power switch located on the inside front panel to OFF and then to ON.

2 Select Expansion Cabinet Installation from the Expansion Cabinet Software Installation Main Menu.

The Expansion Cabinet Software Installation Menu is displayed:

SOFTWARE INSTALLATION PROGRAM
****
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
****

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
3. Expansion Cabinet Installation - From Software DaughterBoard

[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection: 2

3 Select the Flash Boot ROM Utilities (item 7) from the Utilities menu.

The Utilities menu options are listed:

Utilities Menu:

1. Restore Backed Up Database
2. Archive Database Utilities
3. Install Archived Database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages
10. IP FPGA Utilities

[q]uit, [p]revious, [m]ain, [h]elp, or [?], <cr>- redisplay

Enter Selection: 7

4 List Flash Boot ROM (item 1) from the Flash Boot ROM Utilities menu.

The Flash Boot ROM Utilities menu displays:

Flash Boot ROM Utilities Menu:
1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM

[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>- redisplay

Enter Selection: 1

Flash Boot ROM Summary:

Active -- NTDK34FA_r07
Backup -- NTDK34AA_r08

Note: It is possible that there is nothing in the Backup boot ROM. However, the Software Delivery card shows the version that Table 7 gives or a higher release number. If the release number is lower, you cannot upgrade. Check the Software Delivery card for authenticity.

5 Verify your Flash Boot ROM code output from Step 4 with the Software you are loading.

Use Table 8 on page 224 to determine if you have to update your Boot Code. If your Boot Code is current, this procedure is at an end. Continue with Procedure 28 on page 225.

CAUTION

If the release number and boot code version on the Software Delivery card is greater than the active version shown, perform the upgrade.

If the release number and boot code version on the Software Delivery card is less than the active version shown, do not perform the upgrade.

Table 8
Minimum boot code requirements for the Software Release

Software you are loading	Minimum boot code required
Release 25.4	NTDK34FA Release 07

Note: All versions of boot code are backwards-compatible.

6 Upgrade the Flash Boot ROM (item 2) and select yes to perform the upgrade.

The Flash Boot ROM Utilities menu displays:

Flash Boot ROM Utilities Menu:
1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>- redisplay

Enter Selection: 2

Are you sure you wish to perform the Flash Boot ROM Upgrade/Restore (y/n/[a]bort): **Y**

Upgrading Active FLash Boot ROM to NTDK34FA_r07

System Restart required to activate Flash Boot ROM Upgrade.

7 Restart the system to activate the Flash Boot ROM upgrade.

Go to Procedure 28 on page 225 to Upgrade the Software Daughterboard.

——————————— End of Procedure ———————————

Procedure 28
Upgrade the software on the IP Expansion Cabinet using the Software Delivery Card.

Note: This procedure is performed from a TTY connected to the IP Expansion Cabinet.

1 Call up the Software Installation Program during a SYSLOAD.

During SYSLOAD, the following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

Note: Perform this step when starting the Software Installation Program during a **SYSLOAD**. To start the program using the **UPGRADE** command in LD 143, ignore this step and do Step 6 on page 212 instead.

For Option 11C systems, start a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

For Option 11C Mini systems, start a system reload (SYSLOAD) by turning the power switch located on the inside front panel to OFF and then to ON.

2 Select Expansion Cabinet Installation from the Expansion Cabinet Software Installation Main Menu.

The Expansion Cabinet Software Installation Menu is displayed:

```
SOFTWARE INSTALLATION PROGRAM
**************************************************
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
**************************************************

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
3. Expansion Cabinet Installation - From Software DaughterBoard

[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection: 1

Do you wish to do IP configuration? (y/n/{a}bort): y
```

3 Select IP Configuration method from IP Configuration Menu:

The IP Configuration Menu is displayed:

```
IP Configuration Menu:
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection:
```

IMPORTANT

BootP is a broadcast message used for IP Address discovery.

- For Point-to-Point installation, you must select Option 1.
- For Layer 2 LAN installation, the recommended selection is Option 1.
- For Layer 3 LAN installation, you must select Option 2.

Do one of the following:

- Enter **1** to configure the IP Expansion Cabinet Automatically using BootP. Continue with Step 4 in this procedure.
- Enter **2** to configure the IP Expansion Cabinet using Manual Configuration. **Go to Procedure 29 on page 228** Step 3.

4 The software installation is completed automatically without user intervention.

5 Refer to *Maintenance* (553-3001-511) LD 117 to configure the IP Expansion cabinets IP Address.

———————————— ***End of Procedure*** ————————————

Procedure 29
Upgrade/reinstall software on active Option 11C system Using Manual Configuration.

Note: This procedure is performed from a TTY connected to the IP Expansion Cabinet.

1 Call up the Software Installation Program during a SYSLOAD.

During SYSLOAD, the following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

Note: Perform this step when starting the Software Installation Program during a **SYSLOAD**. To start the program using LD 143, ignore this step and do Step 6 on page 212 instead.

For Option 11C systems, start a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

For Option 11C Mini systems, start a system reload (SYSLOAD) by turning the power switch located on the inside front panel to OFF and then to ON.

2 Select Expansion Cabinet Installation from the Expansion Cabinet Software Installation Main Menu.

The Expansion Cabinet Software Installation Menu is displayed:

SOFTWARE INSTALLATION PROGRAM
****
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
****

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
3. Expansion Cabinet Installation - From Software DaughterBoard

[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection: 1

Do you wish to do IP configuration? (y/n/{a}bort): y

3 Select Manual Configuration (item 2) from the IP Expansion Cabinet Configuration Menu.

The IP Configuration Menu is displayed:

IP Configuration Menu:
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection: 2

4 Configure IP Expansion Parameters.

For the following menu, the sample IP parameters will be used:

IP address of the expansion cabinet 100BaseT(F): 47.147.20.101;
Subnet Mask of the expansion cabinet 100BaseT(F): 255.255.255.0;
Gateway address: 47.147.20.1;
IP address of the main cabinet 100BaseT(F): 47.147.10.100.

The IP Parameters menu is displayed:

Enter Expansion New IP Parameters:
Expansion IP: **47.147.20.101**
Expansion NetMask: **255.255.255.0**
Main IP: **47.147.10.100**

Expansion Router/Gateway: **47.147.20.1**

Is this correct? (t/n/[a]bort): **Y**

Note: "Expansion Router/Gateway" appears only in a Layer 3 configuration.

5 The software installation is completed automatically without user intervention.

6 Refer to *Maintenance* (553-3001-511) LD 117 to configure the IP Expansion cabinets IP Address.

——————————— ***End of Procedure*** ———————————

Procedure 30
Upgrade/reinstall software on active Option 11C system with Survivable IP Expansion Cabinet(s)

Note: This procedure is recommended to minimize service disruption on an active switch.

1 Force all IP Expansion Cabinet(s) configured for Survivability to operate in Survival mode.

a Log in to the Option 11C Main and access overlay program 135 (LD 135).

b Type the following at the prompt:

SOTS n

The IP Expansion Cabinet(s) will reboot and restart in Survival mode.

2 Complete Procedure 26 on page 210 and reboot the Option 11C Main Cabinet.

3 Complete Procedure 28 on page 225 for the IP Expansion Cabinet(s).

Note: The Option 11C IP Expansion cabinets configured for Survival will reboot in Survival mode.

4 Force all IP Expansion Cabinet(s) configured for Survivability back in to Normal Mode.

a Log in to the Option 11C Main and access overlay program 135 (LD 135).

b Type the following at the prompt:

SBFS n

The IP Expansion Cabinet(s) will reboot and restart in Normal mode.

End of Procedure

Revert to the previous release of software

The following procedures describe how to revert to the previous release of software, feature set, customer data, and ISM Parameters using the Undo Installation option.

For an upgrade that was done using a PCMCIA card

You can revert an Option 11C/Option 11C Mini to its previous database. You must install and use the same Software Delivery (PCMCIA) card that you used to upgrade the Option 11C/Option 11C Mini.

You cannot use a Software Delivery (PCMCIA) card used to upgrade a later Option 11C/Option 11C Mini. The Security ID no longer matches the original system.

> ***Note:*** When you upgrade a system, it saves (backs up) the existing Option 11C/Option 11C Mini database on the Software Delivery (PCMCIA) card. The card contains only the backed-up database and Security ID of the last Option 11C/Option 11C Mini you used it with.

Summary of steps

This list reviews the steps you follow to revert to the previous database:

1 Make sure you install the correct Software Delivery (PCMCIA) card.

2 Select the Utilities menu.

3 Select Undo Installation option.

4 Revert to the previous database.

Revert to a previous release of software

The following procedure describes how to revert to the previous release of software using the PCMCIA card.

Procedure 31
Revert to previous software procedure

1 To install the Software Delivery (PCMCIA) card.

a Locate slot A in the PCMCIA socket in the faceplate of the Option 11C NTDK20 SSC or the Option 11C Mini NTDK97 MSC card.

b Carefully press on the PCMCIA card until it seats tightly.

Note: This Software Delivery card must be the same one that you used to upgrade this Option 11C/Option 11C Mini. You cannot use a Software Delivery (PCMCIA) card used to upgrade a later Option 11C/Option 11C Mini. The Security ID no longer matches the original system and the “undo” function cannot work.

2 Select the method of starting the Software Installation Program.

There are two methods of starting the Software Installation Program:

- Use the UPGRADE command in LD 143. Continue to Step 3 on page 232.
- Press Ctrl+I when prompted during a SYSLOAD (go to Step 5 on page 233).

3 Log in to the system.

a Type **LOGI** and press <CR>.

`PASS?` displays.

b Respond to prompt.

Note: The response to `PASS?` is distinct in each system. The response shown below is an example only.

PASS?

0000 <CR>

LD 143 <CR>

UPGRADE <CR>

c Look for the following message:

`SOFTWARE INSTALLATION PROGRAM`

- If the message displays, go to Step 5 on page 233.
- If the message does not display, repeat Step 3 on page 232 and make sure you enter correct information.

4 Start system reload (SYSLOAD).

For Option 11C systems, set the circuit breaker on the front of the power supply to OFF and then to ON. For Option 11C Mini systems, turn the power switch located on the inside front panel to OFF and then to ON.

The following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

5 Select Utilities from the Main Menu.

Screen display:

SOFTWARE INSTALLATION PROGRAM

****

Verify Security ID: xxxxxxxx

****

Software Installation Main Menu

1. New System Installation or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card

[q]uit, [h]elp or [?], <cr> redisplay

Enter Selection:

Sample selection:

3 <CR> (Utilities)

6 Select item 6 from the Utilities Menu.

Screen display:

Utilities Menu:

1. Restore backed Up database
2. Archive Database Utilities
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.
10. IP FPGA Utilities

[q]uit, [p]revious, [m]ain, [h]elp [?], <cr> redisplay

Enter Selection:

Sample selection:

`6 <CR>` (Undo Installation)

7 Complete the software installation.

8 Screen display:

*** WARNING *** A system restart will be invoked as part of the Undo Installation process.

Are you sure you wish to undo the installation?

Do one of the following:

- Enter **y <CR>** (yes). Procedure is at an end.
- Enter **n <CR>** (no) and go to Step 6 on page 234.
- Enter **a <CR>** (abort)

End of Procedure

Software installation on the IP Expansion Cabinet using the Preprogrammed software daughterboard

IMPORTANT

BootP is a broadcast message used for IP Address discovery.

- For Point-to-Point installation, you must select Option 1.
- For Layer 2 LAN installation, the recommended selection is Option 1.
- For Layer 3 LAN installation, you must select Option 2.

Point-to-Point or Layer 2 with bootp configuration

For Point-to-Point or Layer 2 with bootp configuration, you do not need a TTY connected to the IP Expansion Cabinet. Power up the system, and the software installs automatically.

Layer 2 or Layer 3 with manual configuration

Procedure 32
Software installation for IP expansion, using the preprogrammed software daughterboard

Note: This procedure is performed from a TTY connected to the IP Expansion Cabinet.

1 Power up the system, and the following menu appears.

```
SOFTWARE INSTALLATION PROGRAM
**************************************************
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
**************************************************

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
3. Expansion Cabinet Installation - From Software DaughterBoard

[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection :

WARNING: If no input within 2 minutes, the system will attempt
```

automatic configuration using bootp. A carriage return will disable this timer and leave you in the menu.

Enter Selection : 1

Do you wish to do IP configuration? (y/n/[a]bort) : y

2 Select Manual Configuration (item 2) from the IP Expansion Cabinet Configuration Menu.

The IP Configuration Menu is displayed:

IP Configuration Menu:
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection: 2

3 Configure IP Expansion Parameters.

For the following menu, the sample IP parameters will be used:

IP address of the expansion cabinet 100BaseT(F): 47.147.20.101;
Subnet Mask of the expansion cabinet 100BaseT(F): 255.255.255.0;
Gateway address: 47.147.20.1;
IP address of the main cabinet 100BaseT(F): 47.147.10.100.

The IP Parameters menu is displayed:

Enter Expansion New IP Parameters:
Expansion IP: **47.147.20.101**
Expansion NetMask: **255.255.255.0**
Main IP: **47.147.10.100**

Expansion Router/Gateway: **47.147.20.1**

Is this correct? (y/n/[a]bort): **Y**

Note: 'Expansion Router/Gateway' appears only in a Layer 3 configuration.

4 The software installation is completed automatically without user intervention.

5 Refer to *Maintenance* (553-3001-511) LD 117 to configure the IP Expansion cabinets IP Address.

———————————— ***End of Procedure*** ————————————

Procedure 33
Software installation for IP expansion, using the preprogrammed software daughterboard through the utilities menu.

1 Power up the system, and the following menu appears.

```
SOFTWARE INSTALLATION PROGRAM
**********************************
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
**********************************

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection :
```

WARNING: If no input within 2 minutes, the system will attempt automatic configuration using bootp. A carriage return will disable this timer and leave you in the menu.

Enter Selection: 1

2 Select IP configuration from the Utilities Menu.

```
Utilities Menu :

1. IP Configuration (L3)
2. Review Upgrade Information
3. Clear Upgrade Information
4. Undo Installation
5. Flash Boot ROM Utilities
6. Current Installation Summary
7. IP FPGA Utilities
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay
```

Enter Selection : 1

3 Enter “y” to confirm IP configuration.

```
Do you wish to do IP configuration? (y/n/[a]bort) : y
```

4 Select the desired method from the IP Configuration menu displayed.

IP Configuration Menu :
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection : 2

5 Configure IP Expansion Parameters.

For the following menu, the sample IP parameters will be used:

IP address of the expansion cabinet 100BaseT(F): 47.147.20.101;
Subnet Mask of the expansion cabinet 100BaseT(F): 255.255.255.0;
Gateway address: 47.147.20.1;
IP address of the main cabinet 100BaseT(F): 47.147.10.100.

The IP Parameters menu is displayed:

Enter Expansion New IP Parameters:
Expansion IP: **47.147.20.101**
Expansion NetMask: **255.255.255.0**
Main IP: **47.147.10.100**

Expansion Router/Gateway: **47.147.20.1**

Is this correct? (y/n/[a]bort): **Y**

Note: 'Expansion Router/Gateway' appears only in a Layer 3 configuration.

6 The software installation is completed automatically without user intervention.

End of Procedure

Entering IP Configuration Menu through Expansion Cabinet Installation - From Software Delivery Card option

With a TTY connected to an IP Expansion Cabinet you can use one of the following procedures to configure IP settings.

Procedure 34
Configure IP settings with Expansion Cabinet Installation option

1 Insert the Software Delivery card for the required release of software in slot A in the PCMCIA socket located in the NTDK20 SSC faceplate.

2 Power up the system, and the following menu appears.

```
SOFTWARE INSTALLATION PROGRAM
************************************
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
************************************

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection : 1
```

3 Enter “y” to confirm IP configuration.

```
Do you wish to do IP configuration? (y/n/[a]bort) : y
```

4 Select the desired method from the IP Configuration menu displayed.

```
IP Configuration Menu :
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection :  2
```

5 Configure IP Expansion Parameters.

For the following menu, the sample IP parameters will be used:

IP address of the expansion cabinet 100BaseT(F): 47.147.20.101;
Subnet Mask of the expansion cabinet 100BaseT(F): 255.255.255.0;
Gateway address: 47.147.20.1;
IP address of the main cabinet 100BaseT(F): 47.147.10.100.

The IP Parameters menu is displayed:

Enter Expansion New IP Parameters:
Expansion IP: **47.147.20.101**
Expansion NetMask: **255.255.255.0**
Main IP: **47.147.10.100**

Expansion Router/Gateway: **47.147.20.1**

Is this correct? (y/n/[a]bort): **Y**

Note: 'Expansion Router/Gateway' appears only in a Layer 3 configuration.

6 The software installation is completed automatically without user intervention.

End of Procedure

Procedure 35
Configure IP settings through the Utilities menu

1 Insert the Software Delivery card for the required release of software in slot A in the PCMCIA socket located in the NTDK20 SSC faceplate.

2 Power up the system, and the following menu appears.

SOFTWARE INSTALLATION PROGRAM
****
Verify
IP Expansion Cabinet Security ID: xxxxxxxx
Main Cabinet Security ID: xxxxxxxx
****

Expansion Cabinet Software Installation Main Menu :
1. Expansion Cabinet Installation - From Software Delivery Card
2. Utilities
[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection: 2

3 Select IP configuration from the Utilities Menu.

Utilities Menu :

1. IP Configuration (L3)
2. Review Upgrade Information
3. Clear Upgrade Information
4. Undo Installation
5. Flash Boot ROM Utilities
6. Current Installation Summary
7. IP FPGA Utilities

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection : 1

4 Enter “y” to confirm IP configuration.

Do you wish to do IP configuration? (y/n/[a]bort) : y

5 Select the desired method from the IP Configuration menu displayed.

IP Configuration Menu :
1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay

Enter Selection : 2

6 Configure IP Expansion Parameters.

For the following menu, the sample IP parameters will be used:

IP address of the expansion cabinet 100BaseT(F): 47.147.20.101;
Subnet Mask of the expansion cabinet 100BaseT(F): 255.255.255.0;
Gateway address: 47.147.20.1;
IP address of the main cabinet 100BaseT(F): 47.147.10.100.

The IP Parameters menu is displayed:

Enter Expansion New IP Parameters:
Expansion IP: **47.147.20.101**
Expansion NetMask: **255.255.255.0**
Main IP: **47.147.10.100**

Expansion Router/Gateway: **47.147.20.1**

Is this correct? (y/n/[a]bort): **Y**

Note: ‘Expansion Router/Gateway’ appears only in a Layer 3 configuration.

7 The software installation is completed automatically without user intervention.

End of Procedure

Feature set and ISM parameters upgrade

Contents

This section contains information on the following topics:

Summary of steps 243

Upgrade the feature set and ISM parameters 244

This chapter describes how to upgrade the feature set and ISM parameters on an Option 11C/Option 11C Mini. This procedure applies when you are not upgrading to a new release (same release upgrade). You do not need the Software Delivery (PCMCIA) card to perform this type of upgrade. This upgrade uses the Software Installation Program (LD 143) and is menu-driven. The program is clear and direct and includes a Help facility to help you make correct selections.

> ***Note:*** If you need more detailed information, refer to "Upgrade Option 11C/11C Mini software to a new release" on page 197. This chapter contains complete details of the Software Installation Program (LD 143).

Summary of steps

The following list reviews the steps you follow to upgrade and install the feature set and ISM parameter:

1 Start the Software Installation Program.

2 Select the System Upgrade function.

3 Select feature set and packages (optional).

4 Select Incremental Software Management (ISM) parameters (optional).

5 Validate keycodes.

6 Load the software.

Upgrade the feature set and ISM parameters

The following procedure describes how to upgrade the feature set and ISM parameters without upgrading the software release.

Note: To answer the following questions, use the Keycode Data Sheet. Please have it available.

Procedure 36
Upgrade feature set and ISM parameters

1 Start the Software Installation Program using overlay program 143.

The overlay sequence required in LD 143 is prompted as follows:

```
>LD 143
CCBR000
.UPGRADE
```

2 Select the System Upgrade option from the Software Installation Program.

The system displays the Software Installation Main Menu.

```
Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card
[q]uit, [h] help or [?], <cr> - redisplay
```

Select item 2 (System Upgrade).

3 Select the Option 11C Feature/Parameter Upgrade from the "Select type of upgrade to be performed" menu.

The system displays the Select type of upgrade to be performed menu.

```
Select type of upgrade to be performed:
1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/Parameter Upgrade
```

Select item 3 (Option 11C Feature/Parameter Upgrade).

Note: In the software menu, Option 11C appears for both Option 11C and Option 11C Mini.

4 Indicate if you want to change the current feature set.

The systems displays the Select Feature Set change menu.

Select Feature Set You Wish to Enable:
1. General Business (ntskxxxx)
2. Enhanced Business (ntskxxxx)
3. Enterprise Business (ntskxxxx)
4. NAS/VNS (ntskxxxx)
5 Retain Current Feature Set
[q]uit, [p]revious, [m]ain menu, [h] help or [?], <cr> - redisplay

Select the Feature Set you wish to enable.

Note: The feature set selected must match that provided with the keycodes.

5 Indicate if there are packages to add.

The system displays the add packages menu.

Do you wish to add packages? (y/n/[a]bort):

Select y to add packages.

Summary of packages selected (example only):
0-2 4-5 7-14-23-29 32-64 67 70-77 79-81 83 86-93 .....

Enter additional packages: <cr> to continue

Enter additional packages followed by a carriage return.

Note: The additional packages must match that provided with the keycodes.

6 Review and make changes to the ISM parameters if required.

The switch displays the current ISM parameters as follows (example only):

ISM Parameters will be set to:

TNS	(200)
ACDN	(300)
AST	(100)
LTID	(100)
RAN CON	(12)
RAN RTE	(2500)
MUS CON	(100)
BRAND	(0)
ACD AGENTS	(300)
ANALOGUE TELEPHONES	(2500)
ATTENDANT CONSOLES	(2500)
BRI DSL	(100)
CLASS TELEPHONES	(2500)
DATA PORTS	(2500)
DIGITAL TELEPHONES	(2500)
INTERNET TELEPHONES	(0)
PHANTOM PORTS	(2500)
WIRELESS TELEPHONES	(2500)
WIRELESS VISITORS	(0)
ITG ISDN TRUNKS	(2500)
TRADITIONAL TRUNKS	(2500)
TMDI D-CHANNELS	(100)
SURVIVABILITY	(4)

Do you wish to change any ISM parameter? (y/n/[a]bort):

Select y to change ISM parameter(s).

Note: If you do not change the feature set, the parameters displayed remain as the current ISM parameters. The ISM parameters selected must match that provided with the keycodes.

7 Verify or change the AUX ID.

The default AUX ID is either the security ID provided with the Option 11C or the Option 11C Mini, or the original 11/11E site ID.

Security ID: xxxxxxxx7
Current AUX ID: xxxxxxxx
Do you wish to change the AUX ID? (y/n/[a]bort):

Select your AUX ID option as provided with the keycodes.

8 Review and confirm the information entered.

The screen displays Same Release Upgrade Summary. Review and confirm the information displayed.

9 Enter the keycodes when prompted.

After the system confirms and accepts the keycodes, the following prompt appears:

```
Are you sure you wish to perform the installation?
```

10 Enter y in response to the prompt.

If the only change is an increase in ISM parameter values, a screen message states that you do not need a sysload. The system has put into operation changes to the ISM values.

If there must be a system reload (SYSLOAD), it does not need to occur immediately. The Option 11C or the Option 11C Mini stores the information until you perform the SYSLOAD. Because a SYSLOAD interrupts service on the system, it is better to start it later when a service interruption is less inconvenient.

End of Procedure

Restore a backed up database

Contents

This section contains information on the following topics:

Summary of steps 249
Restore the database 249

This chapter describes how to use the Restore Backed Up database utility to restore a database from any of the following sources:

- the backup flash drive (using LD 43)
- a software delivery (PCMCIA) card (using LD 43)
- a Customer Configuration Backup and Restore (CCBR) file (using LD 143)

Summary of steps

The following list reviews the steps you follow to restore a backed up database:

1 Select the Utilities function.

2 Select the database source.

3 Restore the database.

Restore the database

The following procedure describes how to restore the database.

Procedure 37
Restore database

1 Use LD 143 to start the Install Setup Program.

a Type **LOGI** and press <CR> to log in to the system.

The screen displays the `PASS?` prompt.

b Enter the system password in response to the prompt.

2 Select Utilities (item 3) from the Main Menu.

3 Select "Restore Backed Up Database" (item 1) from the Utilities Menu.

4 Select source of database.

The selections screen display:

```
Select Restore Database Source:
1. Backup Flash Drive
2. External Drive
3. Option 11C CCBR Restore file
4. Option 11/11E CCBR File
5. Option 11/11E Software Cartridge.
```

Enter your selection and continue.

Note 1: In the Software menu, Option 11C appears for both Option 11C and Option 11C Mini.

Note 2: Selections 4 and 5 do not apply to the Option 11C Mini.

5 Confirm restore database from the backup flash drive.

The screen displays the date of the backed up database and the following prompt displays:

```
Are you sure you wish to perform the Restore?
```

Do one of the following:

- To return to the main menu, type **a** (for abort) and press <CR>.
- If you do not want to restore the database, type **n** (for no), press <CR>, and return to Step 3 on page 250.
- If you want to restore the database, type **y** (for yes) and press <CR>.

The system restores the backed up database selected and a message displays indicating if the restoration succeeded or failed.

- If the restoration is successful, the screen displays the following message:

  ```
  Restore successful
  ```

  Continue with the next step, Step 6 on page 251.

- If the restoration is not completed successfully, return to Step 2 on page 250.

6 Confirm restore database from the external drive (PCMCIA card)

The following message displays:

```
Restoring primary drive from External Drive.
(Date and time)

System Restart required to activate restored
database

Are you sure you wish to perform the Restore?
```

Confirm that you want to continue with the restoration.

7 Restore the database from the CCBR Restore file.

The screen displays the following message:

```
WARNING: You must have an Option 11C CCBR file backed
up.

WARNING: Your internal backup will be erased.

Are you sure you wish to Restore?
```

As the restoration progresses the following displays:

```
Entering receive mode for data transfer...

Escape back to host machine and commence upload...

Database transfer complete...

Restoring Primary drive from CCBR file...

Restore successful.

System Restart required to activate restored

database.
```

Do one of the following:

- If the restoration is successful, continue with the next step, Step 8 on page 252.
- If the restoration is not successful and the BKP011 message displays, go to Step 1 on page 250.
- If the restoration is not successful and any message that is not the BKP011 message displays, go to Step 2 on page 250.

Note: The BKP011 message indicates that the restored database is of a system with a different site ID. The content of the BKP011 message is as follows:

```
Restore successful but site ID in backup image differs
from that of the switch.
```

8 Start a system restart (SYSLOAD).

Set the circuit breaker on the front of the power supply in the main cabinet to OFF then to ON.

- If the SYSLOAD is successful, this procedure is at an end.
- If the SYSLOAD is not successful, go to Step 1 on page 250.

End of Procedure

Configure 3900 series language

Contents

This section contains information on the following topics:

Summary of steps 253
Install the 3900 series language set 254

This chapter describes how to configure 3900 series set languages in an identified Option 11C or Option 11C Mini system using the Software Delivery (PCMCIA) card.

The Language Selections available for the M3900 series sets are as follows:

- **Global 10 Languages** - English, French, German, Spanish, Swedish, Italian, Norwegian, Brazilian Portuguese, Finnish, Japanese Katakana
- **Western Europe 10 Languages** - English, French, German, Spanish, Swedish, Norwegian, Danish, Finnish, Italian, Brazilian Portuguese
- **Eastern Europe 10 Languages** - English, French, German, Dutch, Polish, Czech, Hungarian, Russian, Latvian, Turkish
- **North America 6 Languages** - English, French, German, Spanish, Brazilian Portuguese, Japanese Katakana

Summary of steps

The following list reviews the steps to follow to install the 3900 series set language for the system:

1 Make sure you have installed the Software Delivery card.

2 Select the Utilities menu.

3 Select the Change 3900 series set languages option.

4 Load the 3900 series set language.

Install the 3900 series language set

Configure 3900 series set language using a Software Delivery card.

Procedure 38
Configure the 3900 series set language

1 Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, see Procedure 26 on page 210.

2 Select the method of starting the Software Installation Program.

Note: For more detailed instructions for this and the following steps, refer to Procedure 26 on page 210.

3 Select the Utilities menu from the Software Installation Program.

The system displays the Software Installation Main Menu.

Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card
[q]uit, [h] help or [?], <cr> - redisplay

Select item 3 (Utilities).

4 Select the change 3900 series set languages from the Utilities Menu.

The system displays the Utilities menu.

```
Utilities Menu:
1. Restore Backed Up database
2. Archive Database Utilities
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.
10. IP FPGA Utilities
[q]uit, [p]revious menu, [m]ain, [h]elp or [?], <cr> - redisplay
```

Select item 9 (`Change 3900 series set languages`.).

5 Select the M3900 language set.

```
WARNING : Following selection will overwrite the existing psdl.rec file
WARNING : Need to perform sysload after psdl file is changed.
WARNING: All installed M3900 patches will be removed

Select M3900 Language Set :

1. Global 10 languages
2. Western Europe 10 languages
3. Eastern Europe 10 languages
4. North America 6 languages
5. Spare Group A
6. Spare Group B

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> - redisplay
```

Enter selection: 3

```
Backing up the current psdl.rec file... [wait} 3630080 bytes copied.
Copying current psdl.rec file... [wait] 3630080 bytes copied.
3900 series language set file successfully installed. 67 bytes copied.
```

6 Perform a sysload to enable new 3900 series set language.

———————— ***End of Procedure*** ————————

Archive and remove databases

Contents

This section contains information on the following topics:

Summary of steps 258
Use the archive feature 258

This chapter describes how to use the archive feature to do the following:

- archive a new customer database
- list the archived databases
- remove existing archived databases

You can define the database in an off-site lab environment and save (archive) it on a Software Delivery (PCMCIA) card until you need it. Then you can load it in the customer's system using the Software Delivery card.

To archive a database on the Software Delivery card, you must first define it and load it into the flash ROM on one of the following cards. Which card you load it on depends on your system type.

- NTDK20 Small System Controller (SSC)
- NTDK97 Mini System Controller (MSC)

Make sure you define and load the required database before trying to archive it. Previous chapters describe the methods used to define and load customer databases. This chapter does not repeat this information.

You can list and remove archived databases directly from the Software Delivery card without first loading them on the SSC or MSC card.

Summary of steps

The following list reviews the steps you must follow to archive a customer database:

1. Check to make sure you have the correct Software Delivery card installed.
2. Select the Utilities function.
3. Select the Archive option.

Use the archive feature

The following procedure describes how to use the archive feature to list, add, and remove customer databases.

Procedure 39
Use the archive feature

1 If you need to, install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.

When you add a customer database to the archive, you must first load it on the SSC card or the MSC card of this system.

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, refer to Procedure 26 on page 210.

2 Select the method of starting the Software Installation Program.

Note: For more detailed instructions for this and the following steps, refer to Procedure 26 on page 210.

3 Start the Software Installation Program using LD 143.

4 Select Utilities from the Main Menu.

5 Select item 2 from the Utilities Menu.

6 Select the archive function.

```
Customer Database Archives:
1. List customer databases
2. Remove customer database
3. Archive a customer database
[q]uit, [p]revious, [m]ain, [h]elp or [?]
<cr> - redisplay

Enter Selection:
```

Do one of the following:

- Enter **1 <CR>** (List Customer databases), and continue with the next step, Step 7 on page 259.
- Enter **2 <CR>** (Remove Customer database), and go to Step 8 on page 259.
- Enter **3 <CR>** (Archive a Customer database), and go to Step 9 on page 259.

7 Review the list of archived databases.

Look at the displayed list of archived customer databases and the Customer Database Archives menu.

- If you want to remove a database from the archive, continue with the next step, Step 8 on page 259.
- If you want to add a database to the archive, go to Step 9 on page 259.
- If you want to end the activity here, enter **q <CR>**.

8 Remove the required customer database from the archive.

The screen displays the archived databases and the following prompt:

q]uit, <cr>current menu, [m]ain, [p]revious menu

```
Enter selection:
```

```
Remove database
'Name of archived database'
database?
```

Enter your selection and respond to the confirm removal prompt.

9 Add the customer database to the archive.

When you choose to add a customer database to the archive, the screen displays the following prompt:

```
Enter a Customer name for your customized data:
```

a Type in the name for this archived database.

The system displays the name for confirmation.

b Confirm the name.

The screen displays the following message:

```
Copying database from primary drive to 'Name of
archived database'.
```

End of Procedure

Install an archived database

Contents

This section contains information on the following topics:

Summary of steps 261
Install the database 261

This chapter describes how to install an archived customer database in an identified Option 11C or Option 11C Mini system using the Software Delivery (PCMCIA) card.

Summary of steps

The following list reviews the steps to follow to install an archived customer database:

1 Make sure you have installed the Software Delivery card.

2 Select the Utilities menu.

3 Select the Install Archived database option.

4 Load the database.

Install the database

Install an archived database using a Software Delivery card.

Procedure 40
Install an archived database

1 Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, see Procedure 26 on page 210.

2 Select the method of starting the Software Installation Program.

Note: For more detailed instructions for this and the following steps, refer to Procedure 26 on page 210.

3 Use LD 143 to start the Software Installation Program.

4 Select Utilities from the Main Menu.

The Utilities menu displays:

```
Utilities Menu:
1. Restore Backed Up database
2. Archive Customer defined databases
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.
[q]uit, <cr>current menu, [m]ain, [p]revious menu
```

Select item 3 (Install Archived Database).

The system displays the list of archived customer databases.

5 Select the Customer Database.

Type the name of the database you want to restore.

The system prompts you to confirm the name of the database.

6 Confirm the database selection.

If you respond **yes**, continue with the next step, Step 7 on page 262.

If you respond **no**, go to Step 5 on page 262.

7 Restore the archived database.

- If the restore is successful, the screen displays the following:

```
Restoring Archived database to Primary drive...

Restore successful.

System Restart required to activate database.
```

Note: If the restore is not successful, go to Step 4 on page 262.

End of Procedure

Review and clear upgrade information

Contents

This section contains information on the following topics:

Summary of steps 263
Review and clear upgrade information 263

This chapter describes how to use the Review Upgrade Information and Clear Upgrade Information options.

These options allow you to:

- review entered upgrade information
- clear the upgrade information from the Software Installation Program if you need to

Summary of steps

The following list is a summary of steps to review and clear upgrade information:

- Make sure you have installed the Software Delivery (PCMCIA) card.
- Select the Utilities menu.
- Select Review Upgrade Information option.
- Select Clear Upgrade Information option (if you need to).

Review and clear upgrade information

The following procedure describes how to review and, if required, clear the upgrade information.

Procedure 41
Review and clear the upgrade information

1 Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, refer to Procedure 26 on page 210.

2 Select the method of starting the Software Installation Program.

Note: For more detailed instructions for this and the following steps, see Procedure 26 on page 210.

3 Use LD 143 to start the Software Installation Program.

4 Select Utilities from the Main Menu.

5 Select the Review (item 4) or Clear (item 5) option from the Utilities menu.

- If you select **4**, continue to Step 6 on page 264.
- If you select **5**, go to Step 7 on page 264.

6 Review the summary of the upgrade information.

The screen displays the upgrade information for your review. When finished, go to Step 5 on page 264.

7 Review and clear or keep upgrade information.

The screen displays the selected upgrade information and the following prompt:

```
Do you wish to clear the Upgrade information?
```

Do one of the following:

- Enter **y <CR>** (yes). The procedure is at an end.
- Enter **n <CR>** (no) and go to Step 4 on page 264.
- Enter **a <CR>** (abort, return to Main Menu).

End of Procedure

Firmware upgrade procedure for IP daughterboard

Contents

This section contains information on the following topics:

Summary of steps 265

This chapter describes how to upgrade the Field Programmable Gate Array (FPGA) which resides on the IP daughterboard (with Release 25.30 and later).

Summary of steps

The following list reviews the steps to follow to perform the IP FPGA upgrade:

1. Make sure you have installed the Software Delivery (PCMCIA) card, if there is one.
2. Start the Software Installation Program.
3. Select the Utilities function.
4. Select the IP FPGA utility.
5. Select the appropriate option for the IP daughterboard you are upgrading.

Procedure 42
Upgrade the FPGA firmware

Note: This procedure applies only to the Main Cabinet.

1 Insert the Software Delivery card in slot A of the PCMCIA socket. The socket is located in the faceplate of the Option 11C NTDK20 SSC card or the Option 11C Mini MSC card.

Carefully press on the PCMCIA card until it seats tightly.

2 Log in and load LD 143.

a Enter **LOGI**.

The screen displays the `PASS?` prompt.

b Respond to the `PASS?` prompt.

Note: The response to `PASS?` is different for each system. The response shown below is an *example* only.

LOGI

PASS?

0000 <CR>

LD 143 <CR>

. UPGRADE <CR>

c Look for the following message:

The Main Cabinet Software Installation Menu options are displayed:

```
Main Cabinet Software Installation Main Menu:
1. New Install or Option 11/11E Upgrade - From Software
Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery
Card
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr> -
redisplay
```

Enter Selection:

- If the screen displays the message, continue to Step 3.
- If the screen does not display the message, repeat Step 2 (this step) and make sure you enter the correct information.

3 **Select Utilities (item 3) from the Software Installation Main Menu.**

4 **Select IP FPGA Utilities (Item 11) from the Utilities Menu.**

The following options are listed:

```
IP FPGA Utilities Menu:
1. List IP FPGA versions
2. Upgrade FPGA on IP D/B 1
3. Upgrade FPGA on IP D/B 2
4. Upgrade all IP FPGA's

[q]uit, [p]revious, [m]ain menu, [h]elp or [?],
<cr>-redisplay
```

5 **Select List IP FPGA versions (Item 1)**

6 **Check the FPGA version, and determine whether it is necessary to upgrade the FPGA.**

Look at the version of the active FPGA:

- If the active FPGA version is NTDK87AA Rel a (Hex 10) or later, this procedure is at an end.
- If the active FPGA version is not adequate and needs to be upgraded, continue with Step 7.

7 Return to the IP FPGA Utilities Menu.

8 Enter the appropriate selection for the IP daughterboard(s) that you are upgrading.

Note: For the IP Expansion cabinet, you must install the daughterboard on the lower connector (Connector #2) of the SSC card. Therefore, in this case, selection 3 or 4 is the correct selection.

9 Once you have made your selection from the IP FPGA Utilities Menu, the Main menu appears once again.

10 Reboot the system for the new FPGA version to take effect.

——————————— *End of Procedure* ———————————

Installation summary

Contents

This section contains information on the following topics:

Summary of steps 269
Use the Current Installation Summary utility 269

This chapter describes how to get an installation summary for the Option 11C or Option 11C Mini using the Utilities menu.

Summary of steps

The following steps review how to get an installation summary:

1 Select the Utilities function.

2 Select Current Installation Summary utility.

Use the Current Installation Summary utility

The following procedure describes how to get an installation summary using the Current Installation Summary utility.

Procedure 43
Current Installation Summary utility

Note: For more detailed instructions for this and the following steps, see Procedure 26 on page 210.

1 Use LD 143 to start the Software Installation Program.

2 Start the Software Installation Program when prompted.

3 Select Utilities from the Main Menu.

4 Select Current Installation Summary (item 8) from the Utilities menu.

5 Review the installation summary.

The installation summary displays on the screen for your review.

End of Procedure

Meridian 1

Option 11C and 11C Mini

Upgrade Procedures Guide

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